The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 730.---Vol. XIX.] LONDON, SATURDAY, AUGUST 18, 1849. [Price 6d.

VALUABLE MINE SHARES FOR SALE.—TO BE SOLD, BY AUCTION, on Wednesday, the 22d day of August inst., at the hour of Twelve o'clock at noon, at the Star Inn, HELSTON, by order of the trustees of the estate and effects of Mr. James Clarke, the following SHARES in all those productive

TIN AND COPPER MINES—viz.:

1 (119th)	SHARE in the	GREAT WORK MINES, in the parishes of Breage & Germoe.
1 (112th)	ditto	WHEAL MARGARET—Lelant.
1 (200th)	ditto	WHEAL VOR—Breage.
10 (1000th)	ditto	STRAY PARK—Camborne.
3 (256th)	ditto	WEST TREASURY—Gwinear.
3 (256th)	ditto	WEST PROVIDENCE—Gwinear.
8 (1000th)	ditto	WHEAL TREMAYNE—Gwinear.
5 (256th)	ditto	EAST GODOLPHIN—Breage.
10 (256th)	ditto	ST. AUBYN and GRYLLS—Breage.
4 (128th)	ditto	WHEAL ROSE—Sithney.
6 (219th)	ditto	SOUTH WHEAL FORTUNE—Breage.
1 (128th)	ditto	LELANT CONSOLS—Lelant.
12 (1000th)	ditto	CARN PERRAN—Perranuthnoe.
20 (256th)	ditto	EAST WHEAL HOPE—Gwinear.
2	ditto	TROWAN CONSOLS—Towednack.
4	ditto	WHEAL CARPENTER—Gwinear.

Together with the like SHARES of and in all the MATERIALS and MACHINERY thereof.—Further particulars and information may be had on application to the agents on the mines, and to Messrs. Grylls and Hill, solicitors, Helston.

Dated August 4, 1849.

STAFFORDSHIRE—MOST DESIRABLE INVESTMENT.

TO CAPITALISTS, COAL AND IRONMASTERS, AND OTHERS.—Important SALE of valuable FREEHOLD LAND and MINES, in a newly-discovered and recently-proved district, at ALDRIDGE, near WALSALL, in the county of STAFFORD.—TO BE SOLD, BY AUCTION, by Mr. BATEMAN, on Friday, the 24th day of August, at the George Hotel, WALSALL, at Five o'clock in the afternoon, for Six precisely (by direction of the executors of the late Mr. John Swift), upwards of SEVENTY ACRES of excellent FREEHOLD LAND, with the valuable MINES of COAL, IRONSTONE, FIRE and BLUE BRICK CLAYS, and all other MINERALS in and under the same, situated at ALDRIDGE aforesaid, and GREAT BALL, near Walsall.

The mines have been most satisfactorily proved 160 yards by a trial pit (as under):—

13 Measures of COAL, varying from 1 foot 9 inches to 6 feet 6 inches in thickness.
6 Ditto IRONSTONE, varying from 4½ cwts. to 10½ cwts. to the square yard.
7 Layers of FIRE-CLAY, varying from 2 feet 8 inches to 3 feet 3 inches.
20 Yards of BLUE BRICK-CLAY (in thickness commencing 1½ yard from the surface), in the vicinity of the celebrated Walsall Wood and North Wood Brick-Works.

The land adjoins the estates of Sir E. D. Scott, Lady Foley, E. Tongue, Esq., Captain Dilki, the Rev. J. Davids, the Rev. T. B. Adams, Mrs. Guest, and others. The Wyrley and Essington Canal passes through the property, connecting it with the immediate mineral districts—presenting to coal and ironmasters and others, an unusual opportunity for a safe and lucrative investment of capital.

Further information may be had, and particulars, with plans and section of the mines attached, 14 days prior to the sale, upon applying to Mr. Clarke, Aldridge (one of the executors), who will appoint a person to show the respective lots, and specimens of the different measures of coal, ironstone, fire-clay (being equal to the Stourbridge Fire-Clay), and blue brick and tile clay; also to Mr. Darwell, solicitor, Walsall; Mr. John Roberts, mine agent, Walsall; or the auctioneer, Dudley.

WEST OF SCOTLAND MALLEABLE IRON-WORKS, AND LANDS OF BRAIDHIRST AND MILTON.

TO BE SOLD, BY PUBLIC ROUP, within the Royal Exchange Sale Rooms, on Wednesday, the 29th day of August, 1849, at One o'clock in the afternoon,

MALLEABLE IRON-WORKS.

These large WORKS, belonging to the West of Scotland Malleable Iron Company, situated at MOTHERWELL, in the parish of Dalziel, and county of Lanark, consisting of REFINERY FIRES, FORGE, RAIL, ROLLING, SLITTING, HOOP, PLATE, and SHEET MILLS;

And, with a little further outlay, capable of producing about 600 tons finished iron weekly.

These works, which have been erected on the most approved plan, have been in operation since May, 1847; and, besides rails, can be made to turn out all the sizes and varieties of iron usually required by the trade.

There are on the ground one blowing engine of about 80-horse power for refineries, two forge and two mill engines, condensing and that work expansively, each about 100-horse power. Between the mill engines there is a small subsidiary high-pressure engine, of about 40-horse power, for driving the guide mills. There are likewise one lathe and one pumping high-pressure engines, each about 20-horse power. All these engines, with one exception, are in first-rate working order.

Attached to the works are smiths', wrights', and fitting-up shops, with turning lathes, cranes, &c., complete. Also, offices, stables, mill manager's house, and 98 workmen's houses, besides ample accommodation in the village of Motherwell, immediately adjoining.

These works are most favourably situated, being surrounded by coal and pig-iron works; and, as the Caledonian Railway forms one of the boundaries of the works, railway communication to all parts of the kingdom is afforded; and the works have a direct communication with the Harbour of Glasgow, distant 10 miles, by the Clydesdale Junction Railway. Upset price, £45,000.

LANDS OF BRAIDHIRST AND MILTON.

These lands, situated in the parish of Dalziel, and county of Lanark, lie contiguous, and extend in all to 390 acres, or thereby, but from that fall to be deducted about 30 acres, set apart for the Malleable Iron Works, to be held under Feu; and about 20 acres occupied by the Village of Motherwell, also held under Feu—leaving about 340 acres to be disposed of, together with the Feu-Duties exigible from the portions feued as aforesaid, which Feu-Duties amount to nearly 300*l.* per annum.

The lands are most advantageously situated, being bounded on the south-west side by the turnpike road from Glasgow to Lanark, on the south-east by the turnpike road from Edinburgh to Hamilton, and on the north-east, north, and north-west sides by the River Calder; and being intersected by the Wishaw and Coltness Railway, now forming part of the Caledonian Railway, easy access and communication is afforded to all parts of the kingdom.

There is an excellent Farm-Steading on the lands, with Out-Houses and Cottars'-Houses, sufficient for a large farming establishment; and, having been for some years in the hands of the proprietors undergoing improvements, the lands are in the best condition.

The lands contain MINERALS, and the purchaser will obtain right, not only to the minerals in the Unfeued lands, but also to a large portion of those under the Feued Ground. The Coal has been wrought at a moderate depth for more than 12 months, for the supply of the Malleable Iron Works, and has been proved to be of excellent quality.

It is proposed to reserve to the Proprietors of the Malleable Iron Works a right to Feu about ten acres of additional ground, adjoining their works, at the rate of 6*l.* per acre, (exclusive of Minerals, however), provided the option is exercised within a specified period. Upset price 25,000*l.*

For further particulars, application may be made to Laurence Hill, jun., at the works at Motherwell; James Anderson, at the company's office, 88, St. Vincent-street; or to Moncrieff, Paterson, and Forbes, 45, West George-street, Glasgow, in whose hands are the title-deeds and articles of roup, and plans of the property.

Glasgow, 21st July, 1849.

VALUABLE COLLIERY STOCK OF ENGINES, RAILS, WAGGONS, &c.

MR. WETHERELL will SELL, BY AUCTION, on Thursday, the 30th of August next, at Ten o'clock in the forenoon, a LARGE QUANTITY of valuable COLLIERY STOCK, now lying at the SHINCLIFFE STATION, on the York, Newcastle, and Berwick Railway, consisting of ONE ENGINE, of 45-horse power, with boilers, &c.; ONE ENGINE, of 35-horse power, with boiler, &c.

Also, ONE HUNDRED TONS of RAILS and CHAIRS, of various sizes, and FORTY-FIVE SPRING-MOUNTED COAL WAGGONS, in excellent repair.

At the same time and place, will BE SOLD, an excellent ENGINE, 80-horse power, with boilers, &c. This engine is now standing at Evenwood Colliery, where it may be seen on application to David Welford, at the Oaks, Evenwood.

N.B.—The stock at Shincliffe Station may be seen on application to Mr. Oxdale, station master, where catalogues may be had; and also of Mr. Brogden, Stockton-on-Tees, and Mr. Wetherell, Durham.—Durham, July 31, 1849.

EXTENSIVE IRON-WORKS FOR SALE, BY PRIVATE BARGAIN,

THE BLAIR IRON-WORKS,

Belonging to the Ayrshire Iron Company, with the whole MINERAL FIELDS held by the said company, under favourable leases, including the MALLEABLE IRON-WORKS, immediately adjoining, so far as erected—all as particularly described in former advertisements.—There is a large STOCK of IRONSTONE on the ground, which may be had at a valuation.

For further particulars apply to Mr. Biggart, at the works; Mr. Watson, 32, and Mr. Brown, 35, St. Vincent-place, Glasgow; Messrs. M'Clelland and Mackenzie, accountants, there; Messrs. Gibson-Craig, Dalziel, and Brodie, W.S., Edinburgh; or Messrs. Montgomerie and Fleming, writers, Glasgow—the last being in possession of the title-deeds.

Glasgow, June 20, 1849.

COAL.—TO BE SOLD, OR LET, either in one or more lots, all that valuable VEIN of COAL, commonly called the UPPER MOUNTAIN MINE, extending over about 1000 acres—situate in the township of GREAT HARWOOD, in the county of Lancaster. The mine has been recently proved, and found, at 77 yards from the surface, to be 5 feet in thickness, and of an excellent quality. The above property is within a short distance of the Leeds and Liverpool Canal, and in the midst of a populous and large manufacturing district.

A section of the borings may be seen by applying to Mr. Boosie, Rufford Hall, Ormskirk; or to Mr. Whittle, Charnock Richard, Chorley—to either of whom proposals may be sent.

VALUABLE AND EXTENSIVE MINES OF COAL AND IRONSTONE.

TO BE LET, ON LEASE, on most advantageous terms, the COAL and IRONSTONE under a very large tract of land, in the parish of RUABON in the county of DENBIGH, adjoining the Shrewsbury and Chester Railway.

The proprietors of the ESTATES on which the Ponkey and Aberderfyn Iron-Works were formerly carried on, have made arrangements TO LET BOTH PROPERTIES TOGETHER, which will give the lessee of them facilities to carry on a lucrative business—very rarely to be met with.

The COALS and IRONSTONE on these ESTATES may be raised at very much less than an average cost, and the quantity proved in them (besides what are under a very large portion of one of them, in which there is no doubt they will be found) is estimated will supply iron-works with materials to make 400 tons of pig-iron weekly for upwards of 30 years, as well as 50,000 tons of the much and justly-celebrated Yard and Wall and Bench Coals per annum for sale, for the same period.

Printed particulars of the property, and lithographed plans of the estates, showing the minerals under them, with calculations as to the expense of making iron from them, as compared with that of manufacturing it in Staffordshire, may be had upon application at the office of the *Mining Journal*, 26, Fleet-street; and at J. Boydell's, 54, Threadneedle-street, London; and at Messrs. Longeville and Williams, solicitors, Oswestry.

Oswestry, June 6, 1849.

MINES IN FLINTSHIRE.—TO BE SOLD, BY PRIVATE TREATY, by order of the trustees of the late William Williamson, Esq., of Greenfield, SHARES in the following valuable and well-known MINES, in the county of Flint—viz.:—TALARGOCH, HENDRE, TALACRE, NANT, and PARRY'S MINE (HALKIN.)—Most of the above mines are so celebrated, and have been so long established, that it is unnecessary to add a word in support of their claim to public attention.

ON SALE also, BY PRIVATE TREATY, a MOIETY of the COAL and MINERALS under about TWENTY-EIGHT ACRES of LAND, in GWESPYR, in the parish of LLANASA, now in the occupation of —— Jones, Esq.

For information and particulars apply to Mr. Williamson, solicitor, Pendre, Holywell; Mr. William Williamson, solicitor, Well-street, Holywell; or to Mr. E. H. Williamson, Greenfield, near Holywell, Flintshire.

IRON ORE—FURNESS, LANCASHIRE—TO MINERS AND OTHERS.—LEASES of IRON ORE, in this district, will be GRANTED to PARTIES with CAPITAL, wishing to undertake the necessary trials.—For further particulars apply to J. Cranke, Esq., Ulverston.—The Furness Railway connects the mineral district with Barrow Harbour, where there is excellent accommodation for shipping the ore with certainty and dispatch, and at a moderate cost.

LOANS ON DEBENTURES.—The CALEDONIAN RAIL-WAY COMPANY are prepared to RECEIVE TENDERS OF LOANS, in sums not less than £500.—Applications to be made or addressed to this office.

125, George-street, Edinburgh, May 30, 1849. D. RANKINE, Treasurer.

Just published, in 8vo., price 1s. 6d., or free post, 2s.,

GAS-LIGHTING: ITS PROGRESS AND ITS PROSPECTS, with REMARKS on the RATING OF GAS-MAINS, and a NOTE on the ELECTRIC LIGHT, By J. O. N. RUTTER, F.R.A.S.

"The literary merits of this pamphlet are considerable. Mr. Rutter's competency to enlighten the public on the subject is well known."—*Daily News.*

John W. Parker, West Strand, London, and all booksellers.

Just published, price Sixpence,

By J. B. Nichols and Sons, 25, Parliament-street, Westminster,

ON THE VENTILATION OF COAL MINES BY WILLIAM BRUNTON, Mem. Inst. C.E.,

Being a DESCRIPTION OF VENTILATION by HEAT, as usually adopted; and of the far better mode invented by the author.

CLERICAL, MEDICAL, AND GENERAL LIFE ASSURANCE SOCIETY.

Notice is hereby given, that the usual DIVIDEND of FIVE PER CENT. (less income tax) on the paid-up capital on the shares of the Society, will be PAYABLE at this office, on and after Monday, the 20th day of August inst.

INVALID LIVES.

In addition to assurances on healthy lives, this Society continues to grant policies on the lives of persons more or less DEVIATING from the healthy standard, on the payment of a premium proportioned to the increased risk.

Further information can be obtained (free of expense) by addressing a line to GEO. H. PINCKARD, Resident Secretary,

No. 99, Great Russell-street, Bloomsbury, London.

TO THE OWNERS OF COLLIERIES, MINES, PLAN-TATIONS, SAW-MILLS, &c.—Improved Circular Saws, Mill-Saws, Files, Machine Irons, and Cutting Knives, Steel in Blister, Bar, Cast, Shear, and Drift Steel, Springs for Railways and Common Roads, Iron Washers, Bolts, Hammers, &c., on the most PERFECT and ECONOMICAL PRINCIPLES, MANUFACTURED with DISPATCH, by

BLAKE AND PARKIN,

THE MEADOW STEEL-WORKS, SHEFFIELD.

TO ENGINEERS AND BOILER MAKERS.—The BIRMINGHAM PATENT IRON TUBE COMPANY

MANUFACTURE PATENT LAP-WELDED IRON TUBES (under Mr. R. Prosser's Patent) for Marine, Locomotive, and all Tubular Boilers. Also, TUBES for Gas, Steam, and other purposes. All sorts of IRON GAS FITTINGS.

Works—Smethwick, near Birmingham.

London Warehouse—No. 6, Upper Thames-street.

DUISBURG IRON-WORKS AND MINES, *IN WESTPHALIA, CLOSE TO THE RHINE.*

Managed in England according to the principles of the "Cost-book System," and in Prussia as a *Société in Commandite*, under laws limiting the liability of the shareholders to their personal subscription.

Company's Offices, 26, Moorgate-street, City.

DEVON.—HENNOCK IRON, STEEL, AND TIN MINING COMPANY.

ON THE COST-BOOK PRINCIPLE.

Bankers—Devon and Cornwall Bank, Exeter and Newton Abbott.
Solicitors—Messrs. Kennaway and Buckingham, Exeter.

Capital £9450, in 4500 shares, at £2 2s. each, without further calls or liability.
Deposit £1 1s. per share.

The promoters of this company propose to raise the above capital to work efficiently these very valuable mines of micaceous iron and tin ore, situate in the parish of Hennock, 12 miles west of Exeter, and 2 from Bovey Tracey, on the confines of Dartmoor.

These mines are not a new discovery, but possess the advantage of having had their merits tested to an extent that fully establishes their great capabilities, and warrants the expectation of a large trade at a highly remunerating profit.

Prospectuses and particulars supplied on application (if by letter, post-paid) to Mr. Tripp, Bedford Chambers, and of Mr. T. Sanford, Exeter; Mr. H. Luscombe, Plymouth; Mr. B. S. Stock, Bristol; Mr. C. P. Cameron, Liverpool; Mr. J. Lane, 80, Old Broad, street, Mr. Herron, 33, Clements-lane, and at the office of the *Mining Journal*, No. 26 Fleet-street, London.

GEOLOGY.—Persons wishing to become ACQUAINTED with this interesting BRANCH OF SCIENCE, will find their STUDIES greatly FACILITATED by means of ELEMENTARY COLLECTIONS, which can be had at TWO, FIVE, TEN, TWENTY, or FIFTY GUINEAS each, arranged and sold by Mr. TENNANT, 149, STRAND, LONDON.

A COLLECTION for FIVE GUINEAS, which will illustrate the recent works on Geology, contains 200 specimens, in a mahogany cabinet, with five trays—viz.:

MINERALS which are the components of rocks, or occasionally imbedded in them—Quartz, agate, calcedony, jasper, garnet, zeolite, hornblende, augite, asbestus, felspar, mica, talc, tourmaline, calcareous spar, fluor, selenite, baryta, strontia, salt, sulphur, plumbago, bitumen, &c.

METALLIC ORES.—Iron, manganese, lead, tin, zinc, copper, antimony, silver, gold, platina, &c.

ROCKS.—Granite, gneiss, mica-slate, clay-slate, porphyry, serpentine, sandstones, limestones, basalt, lavas, &c.

FOSSILS from the Llandeilo, Wenlock, Ludlow, Devonian, carboniferous, lias, oolite, wealden, chalk, plastic clay, London clay, and crag formations, &c.

Mr. TENNANT gives PRIVATE INSTRUCTIONS in MINERALOGY, with a view to facilitate the study of Geology, and of the application of Mineral substances in the Arts, illustrated by an extensive collection of specimens, models, &c.

WIRE ROPE.—The Undersigned beg to inform the public, that they have become SOLE LICENSEES of Mr. ANDREW SMITH, for the MANUFACTURE and SALE of his PATENT WIRE ROPE; and having fitted their premises with his very superior improved machinery, have only to assure those who may favour them with their orders, that the same care and attention shall always be bestowed which, they have reason to believe, has secured them such general support.

LIGHTNING CONDUCTORS, SIGNAL CORD, and SASH LINE, always in stock.

WILKINS & WEATHERLY.

Patent Wire Rope Works, No. 39, High-street, Wapping, London.

TO ENGINEERS AND COAL PROPRIETORS.—WANTED, by a GENTLEMAN, who has had 10 years experience in Mineral, Railway, and Estate Surveying, a SITUATION in any of the above branches: he is also an experienced leveller. Terms moderate.—No objection to go to the continent, or to any of Her Majesty's Colonies.—Address "M. A.," Post-office, Wakefield.

TO CONTRACTORS AND MINERS.—CONTRACT FOR WORKS.—TO BE LET, the EXECUTION of about ONE MILE of TRAMWAY, near ULVERSTON.—The works, in addition to considerable rock cutting, will include 400 yards of heading, 5 feet by 7 feet 6 inches, to be driven through limestone.

For particulars apply at No. 17, Great George-street, Westminster, or at the Railway Office, Barrow.—July 30, 1849.

WANTED TO PURCHASE—FOUR HUNDRED to FIVE HUNDRED TONS good SECOND-HAND DOUBLE-HEADED RAILS, 40 to 50 lbs. per yard.—Also, FOUR HUNDRED to FIVE HUNDRED TONS DITTO DITTO, 50 to 60 lbs. per yard—they are required to be delivered at a shipping port.

Apply, with lowest price, to William Fox and Son, 53, Castle-street, Liverpool.

A WELL-FINISHED, HIGH-PRESSURE STEAM-ENGINE, 2-feet 4-inch stroke—cylinder 10-inch diameter, with metallic piston, governor, &c., TO BE SOLD CHEAP, apply to P. M. Crane, 13, George-street, Mansion-house, London.

STEAM-ENGINE FOR SALE.—TO BE SOLD, BY PRI-VATE CONTRACT, an 85-inch cylinder STEAM-ENGINE, 10-feet stroke, equal beam.—Application to be made to Messrs. Hocking and Loam, engineers, Redruth.

MINING PROPERTY.—Mr. JAMES HERRON, MINE AGENT, 33, CLEMENTS-LANE, LOMBARD-STREET, has received instructions to DISPOSE of SHARES in FIRST CLASS MINES, paying regular dividends, and yielding to the purchaser from 17½ to 25 per cent. upon his outlay. He is also in a position to transact business in the following—viz.; United Mexican; St. John del Rey, Copiapo, Alton, Tincroft, South Tamar, Treleighs, Linares, Santiago, East Rose, Trelawny, Mary Ann, Holmbush, South Francis, Stray Park, Great Consols, Great Devon Consols, West Caradon, and Condurrow Mines.

MR. HENRY VATCHER, MINING AND RAILWAY SHAREBROKER, EXETER.

Competent and experienced AGENTS provided to INSPECT MINES, at the shortest notice.

MR. C. S. RICHARDSON, CIVIL ENGINEER, LAND AND MINING SURVEYOR,

No. 15, OLD BROAD-STREET, CITY.

JAMES LANE, MINING SHARE DEALER,

80, *OLD BROAD-STREET, LONDON.*

MR. GEORGE BATE, Jun., CIVIL ENGINEER AND SURVEYOR, *WOLVERHAMPTON.*

Offices in Queen-street, corner of Piper's-row.

N.B.—UNDERGROUND MINING SURVEYS accurately executed.

MR. JAMES STRIDE, MINING AGENT, and DEALER IN SHARES, 27, *SPRING-GARDENS, LONDON.*

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

AUSTRALIAN MINING COMPANY.—The board of direc-tors hereby give Notice, that they have made a CALL of ONE POUND per share on the registered shares in the company, to be PAID on or before the 21st day of August, 1849, to the company's bankers, Messrs. Masterman, Peters, and Co., Nicholas-lane, Lombard-street, London. Interest, at the rate of 5 per cent. per annum, will be charged on all calls not paid on or before the 21st day of August. The call letter must be presented at the bankers at the time of payment.

N.B.—The transfer books of the company will be closed from Saturday, the 4th of August, until Thursday, the 6th of September. By order of the board,
(Signed) J. A. JOSEPH, Secretary.

1, Adelaide-place, London-bridge, July 31, 1849.

BEDFORD UNITED MINES.—Notice is hereby given, that the MEETING ADJOURNED from the 5th July last, will be HELD at this office, on Thursday, the 23d instant, at One o'clock precisely. Some scrip certificates in this mine being still outstanding, it is requested that the same be left at the office, to be cancelled and registered in the Cost-Book. The party depositing the scrip certificates will be required to sign the Cost-Book, agreeably to the resolutions passed at the general meeting, held on the 9th December, 1847, when the dividends due 31st March, and 22d December, 1848, will be paid. By order of the committee of management,

50, Threadneedle-street, 17th August, 1849. G. KIECKHOEFER, Sec.

PARIS AND LYONS RAILWAY.—CHARLES DEVAUX and CO. have the honour to inform the holders of shares in the above company that they have been requested by the Minister of Finance (Treasury Department), to communicate to them the following notice, viz.:—The holders of PARIS and LYONS SHARES who have not yet claimed the French rentes allotted them by the decree of the 17th August, 1848, are requested to present their shares at the Treasury in Paris, without any delay, and at the latest by the 1st September, 1849. After the above date those shares which have not been presented will be cancelled, and the French rentes allotted to them will be carried to the unclaimed stock.

Shareholders sending their shares to C. Devaux and Co., on or before the 29th inst. will have them exchanged for French rentes, and be paid the interest now overdue on the same.—London, 62, King William-street, City, August 13, 1849.

WARRANTED SAFETY FUSE.—W. BRUNTON & CO. beg to inform Mine Agents, Contractors, and Merchants, that having completed their Machinery for the MANUFACTURE of the ABOVE ARTICLE, they are enabled to offer FUSE of a very superior quality, and at considerably reduced prices.

W. B. & Co. can SUPPLY FUSE in ANY LENGTHS that may be required.

Penhellick Fuse Factory, Pool, Truro, Cornwall.

TESTIMONIALS.

We, the undersigned, hereby bear our testimony to the excellence of the Safety Fuse, manufactured by Messrs. Brunton and Co. We have had it in use in our mines; and, after sufficient trial, find it to be fully equal to any Fuse we have ever used:—

Carn Brea Mine.
R. H. Pike, Purser.
John Lenten, James Miners, John Vivian, John James, } Agents.

North Pool Agents.
James Evans.
John Nancarrow.
Frederic Evans.

South Roskear Agents.
John Dunkin.
William Thomas.

Cook's Kitchen Agents.
Joseph Vivian.
Richard Bennetts.

Cook's Kitchen Agents.
John Ivey.
William Hitchens.

North Roskear Agents.
Joseph Vivian.
William Michell.
William Thomas.

Tincroft Agents.
Peter Floyd.
Thomas Stainsby.
Thomas Loan.
Henry Hocken.
Richard Martin.

William Nancarrow.
Alex. Eudey, Joseph Eudey, } *Wheal Agar Agents.*

BICKFORD'S PATENT SAFETY FUSE.—The Patentees of the ORIGINAL, and only real, SAFETY FUSE, beg to inform Merchants, Mine Agents, Railway Contractors, and all persons concerned in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE *has now a thread wrought into its centre*, which being patent right, infallibly *distinguishes it from all imitations*, and ensures the continuity of the gunpowder. The Safety Fuse is now protected by a second Patent, and manufactured by greatly improved machinery. BICKFORD, SMITH, & DAVEY, Camborne, Cornwall.

INDURATED AND IMPERVIOUS STONE, CHALK, &c. —AGENTS, with capital, are WANTED in all TOWNS to SUPPLY (under British and Foreign Patents) the great demand for HUTCHISONISED MATERIALS—hard as granite, impervious to moisture, vermin, &c.; the cheapest and most durable for all buildings, hydraulic, paving, monumental and decorative work.—The profits are large.

Apply to HUTCHISON & CO., East Temple Chambers, London, or Tunbridge Wells, Kent, stating name, address, and capital at command.

N.B.—Houses cured of damp. The produce of soft stone quarries, chalk, plaster of Paris, wood, pasteboard, and all absorbent materials indurated to resist frost, vermin, &c.

LICENCES GRANTED.

EMPLOYMENT OF CRIMINALS IN MINES.—It appears that in the year 1609 this experiment was tried for the first time in England at the mines of Bwich and Esgair Llee, in the county of Cardigan. In a report laid before the company of mine adventurers for that year, it states the taking of condemned criminals to work at the mines, seems a design advantageous to the public, charitable to the poor offenders, and may be in time profitable to the company. The few we received were only taken for a trial, and as apprentices for five years, His Majesty being graciously pleased to pardon them on that condition, that the company may find out by experience what methods may prove effectual, and may be proper to be humbly offered to His Majesty and the honourable Members of both Houses of Parliament, both for the reclaiming and making such criminals useful to the nation. For though it is agreed by all that His Majesty may legally pardon criminals on any such condition, especially when the men are free, and not bear the least badge of slavery used, yet there seems a necessity of having an Act of Parliament to make this matter generally practicable and useful to the nation; but at present they are under no restraint, and the company is bound to maintain them in meat, drink, and clothes, to be adjusted and settled (as in case of other apprentices) by the justices of the limits in the county of Cardigan. They were told that this was the first essay of England of this kind, to try if criminals would be reformed and remain useful to the nation, that it was to be hoped they would show a good example, to encourage which, if they did, it would not be the saving of their lives only, but, in all probability, of several thousands more, since it would be a great profit to the nation, as it has been computed that the country loses 10*l.* per annum for every man that is executed; therefore, it was hoped that, for the good of themselves, their brethren, and their country, they would regain their lost credit, and serve out their time with cheerfulness, upon which they all promised fair. They were set to working the ore, and pumping the water.

On the Ventilation of Coal Mines. By W. BRUNTON, M.I.C.E. London: J. B. Nichols and Son, Parliament-street, Westminster.

A pamphlet, under this title, has come under our notice; and at a moment when public attention is so much directed to the subject of accidents in collieries, we cannot doubt for a moment but that it will be read by all interested in a subject which is important, not only to the miner, but to those who with feelings of humanity look upon the sufferings and dangers to which those employed in collieries and mines are subject. The question is treated upon in another column, and the accident at Aberdare, within the past week, renders the subject one of more than ordinary interest at the present moment. We reserve until another occasion entering upon the theory or principles put forward by the author, but cannot do otherwise than impress on all interested, the acquirement of this, or any other work which may tend to elucidate the grand object all have in view—that of saving the fearful loss of life attendant on the want of a more perfect ventilation for coal mines.

THAMES TUNNEL COMPANY

The number of passengers who passed through the Tunnel in the week ending Aug. 11, was—No. of passengers, 14,142. —Amount of money, £58 18s. 6d.

EDEN'S FAMILY MEDICINES.—EDEN'S HOOPING-COUGH MIXTURE has attained universal celebrity as a sure and efficacious remedy for coughs, colds, asthma, influenza, pulmonary consumption, and all affections of the throat, chest, and lungs; a positive cure for hooping-cough, and all diseases to which children are subject.—EDEN'S PILLS are acknowledged by all to be the safest and best medicines in the world for the cure of billious and nervous complaints, gout, rheumatism, bowel complaints, consumption, and general debility.—EDEN'S FAMILY OINTMENT, as a cure for scrofula, and all cutaneous eruptions of the skin stands unrivalled.—EDEN'S FAMILY MEDICINES are prepared only, and sold wholesale, by Eden and Co., 2, Jewin Crescent, London, and retail by most respectable chemists and patent medicine venders in the United Kingdom, in bottles, boxes, and pots, at 1s. 1½d., 2s. 9d. and 4s. 6d. each. 38

ON NERVOUS DEBILITY AND GENERATIVE DISEASES.

Just published, the fortieth thousand, an improved edition, revised and corrected, 120 pages, price 2s., in a sealed envelope, or forwarded, post-paid, by the Author, to any address, secure from observation, for 2s. 6d., in postage stamps, illustrated with numerous anatomical coloured engravings, &c.

MANHOOD: the CAUSES of its PREMATURE DECLINE, with plain directions for its perfect restoration. A Medical Essay on those distinct exceases, the effects of climate, and infection, &c., addressed to the sufferer in cases of the Generative Organs, emanating from solitary and sedentary habits, indiscriminate exceases, the effects of climate, and infection, &c., addressed to the sufferer in youth, manhood, and old age; with practical remarks on marriage, the treatment and cure of nervous and mental debility, impotency, syphilis, and other urino genital diseases, by which even the most shattered constitution may be restored, and reach the full period of life allotted to man. The whole illustrated with numerous anatomical engravings on steel, in colour, explaining the various functions, secretions, and structures of the reproductive organs in health and disease; with instructions for private correspondence, cases, &c.—By J. L. CURTIS, consulting surgeon, 7, Frith-street, Soho-sq., London. 39

REVIEWS OF THE WORK.

We feel no hesitation in saying, that there is no member of society by whom the book will not be found useful—whether such person hold the relation of a parent, preceptor, or a clergyman.—*Sun*, Evening Paper.

J. L. Curtis, *On Manhood, and the Causes of its Premature Decline; with Plain Directions for its Perfect Restoration.*—[Strange, Paternoster-row.]—This is a book replete with valuable advice and information. It developes the fearful shoals on which a large portion of human happiness is wrecked, and furnishes a chart by which they may be avoided and escaped. Fortunate for a country would it be, did its youth put into practice the philanthropic and scientific maxims here laid down. One cause of matrimonial misery might then be banished from our land, and the race of the enervate be succeeded by a renewal of the hardy vigorous spirits of the olden time.—*United Kingdom Magazine.*

Manhood: by J. L. Curtis and Co.—Their long experience and reputation in the treatment of these painful diseases is the patient's guarantee, and well deserves for the work its immense circulation.—*Era.*

Manhood: a medical work.—To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions—whilst to some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health.—*Chronicle.*

Published by the author, and may be had at his residence; sold also by Strange, 21, Paternoster-row, London; Heywood, Oldham-street, Manchester; Howell, 16, Church-street, Liverpool; Robinson, 11, Greenside-street, Edinburgh; Campbell, chemist, 146, Argyle-street, Glasgow; Berry and Co., Capel-street, Dublin; and by all booksellers.

THIRTY-FIRST EDITION.

Illustrated by 26 Anatomical Coloured Engravings on Steel, On Physical Disqualifications, Generative Incapacity, and Impediments to Marriage. New Edition, enlarged to 196 pages.—Just published, price 2s. 6d., or by post, direct from the establishment, 3s. 6d. in postage stamps.

THE SILENT FRIEND: a medical work, on the infirmities and decay of the generative system, from excessive indulgence, infection, and the inordinate use of mercury, with remarks on marriage, and the means of obviating certain disqualifications, illustrated by 26 coloured engravings. By R. & L. PERRY & Co., consulting surgeons, 19, Berners-street, Oxford-street, London. Published by the authors; sold by Strange, 21, Paternoster-row; Hannay, 63, and Sanger, 150, Oxford-street; Starie, 23, Titchborne-street, Haymarket; and Gordon 146, Leadenhall-street. 40

PART THE FIRST treats of the anatomy and physiology of the reproductive organs, and is illustrated by six coloured engravings.—PART THE SECOND treats of the consequences resulting from excessive indulgence, and their lamentable effects on the system, producing mental and bodily weakness, nervous excitement, and generative incapacity; it is illustrated by three explanatory engravings.—PART THE THIRD treats of the diseases resulting from infection, either in the primary or secondary form, and contains explicit directions for their treatment. This section is illustrated by 17 coloured engravings.—PART THE FOURTH contains a prescription for the prevention of disease by a simple application, by which the danger of infection is obviated. This important part of the work should not escape the reader's notice.—PART THE FIFTH is devoted to the consideration of marriage and its duties. The causes of unproductive unions are also considered, and the whole subject critically and philosophically inquired into.

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BY SAMUEL LA'MERT, M.D., 37, BEDFORD-SQUARE, LONDON.

Doctor of Medicine, Matriculated Member of the University of Edinburgh, Licentiate of Apothecaries' Hall, London, Honorary Member of the London Hospital Medical Society, &c.

REVIEWS OF THE WORK.

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Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY .....Condurrow Mining Company—on the mine.
Northern and Eastern Railway—offices, at One.
THURSDAY ....Llynvi Valley Railway—offices, at One.
Brighton Gas Company—offices, at One.
York, Newcastle, and Berwick Railway—York, at half-past One.
East Anglian Railway—London Tavern, at One.
FRIDAY .....Londonderry and Enniskillen Railway—offices, at Twelve.
SATURDAY.....Whitehaven and Furness Railway—offices, at One.
Cornwall Railway—Town Hall, Truro—at Twelve.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

CAMERON'S COALBROOK STEAM COAL AND SWANSEA AND LOUGHOR BAILWAY COMPANY.

The adjourned general meeting of shareholders was held at the offices of the company, on Thursday, the 16th inst., pursuant to notice. A considerable delay took place from the absence of Mr. Winthrop, the chairman at the last meeting, and there not being a sufficient number of shareholders in attendance—the Deed of Settlement requiring ten—Mr. SMALLBONE considered that the important nature of the business for which the meeting had been convened required the presence of the chairman, and as there were several questions he wished to put, he thought it would be prudent further to adjourn, there being then only two directors present. It was not, however, his wish to control the meeting; he would suggest a fortnight's adjournment.

Mr. BARHAM having declined to occupy the chair, the same was taken by Captain NORCOTT, R.N.

The SECRETARY proceeded to read the advertisement and resolutions passed at the preceding meeting, which have already appeared in our columns.

Mr. WHITE wished to inquire from the chairman whether, in the list of liabilities which appeared in the balance-sheet, and which he then held in his hand, the solicitor's account was included.

Mr. ELDERTON (the solicitor to the company) begged to state that such was not included, nor had the amount been furnished; in fact, he had not had time to cause the account to be rendered in a complete state, but that as soon as leisure permitted it would be sent in; he considered that by such delay the company were in no way prejudiced, but rather benefitted.

In reply to a question as to the item of sundry debts, amounting to 6000*l.* and upwards, the SECRETARY stated such to consist of "promiscuous" debts, as arrears of salaries, interest, royalty, &c., the latter having, however, been paid up to Lady-day last.

Col. BAINES complained sorely that the solicitor's bill of costs had not been furnished, although promised so long since, whereupon Mr. ELDERTON stated that the board of directors had never called for the account, but such should be furnished in due course.

Mr. WHITE observed, that on looking at the accounts, it did not appear to him that they had been audited, and hence could not be passed, on which the SECRETARY explained, that the cause arose from the secession of Mr. Burls, one of the auditors, from the company, and the transfer of his shares, and under such circumstances, Mr. Strelley, the remaining auditor, having declined to take upon himself the sole responsibility of auditing and signing the accounts, the directors had, therefore, submitted them to Messrs. Quilter, Ball, and Co., who had examined the same, and reported them as being correct. He (Mr. White), however, referred to the Joint-Stock Companies' Act, which provided for the appointment of auditors, in case of death or retirement, and showed that *one or more* auditors were to be appointed, arguing therefrom that one auditor was sufficient to have examined the accounts.

Mr. STRELLEY, as auditor, wished it to be understood that the reason why he did not sign them, was because he did not understand them. He agreed with Messrs. Quilter and Co. as to certain items; but there were some, he must confess, he did not understand even up to the present time; and it was on this account solely that he did not attach his signature.

Col. BAINES objected to the course pursued by the directors in transferring to Mr. Cameron and to Capt. Earle certain shares in the company in trust, thereby releasing the former holders, and throwing an onus upon the remaining shareholders, which he would not admit could be legally done. By this transfer of the shares, it was true that a sum of 5713*l.* 5s. 11d. had been paid by the parties to get out of the concern, and the interest so abandoned by them was represented as being 25,585*l.* paid up; but what was the value of the shares in the present state of things—or rather what were the responsibilities, or liabilities, thrown upon the remaining shareholders? He considered that the course pursued by the directors was most culpable, without having first consulted the proprietors. However, he was not afraid of the results, inasmuch that he was no party to the act, nor would he recognise it. There were not at present more than 80 or 90 shareholders who would be called upon to meet future calls, and take upon themselves those liabilities from which the directors had professed to release the parties retiring.

Mr. WHITE could not help repeating the observation he had already made, that in the absence of any accounts being signed by the auditors, as required by the Act, so that the same should be laid before the registrar, the accounts could not be passed, which in the end was assented to, inasmuch that neither the report nor accounts were received, approved, passed, or ordered to be entered on the minutes.

Mr. ELDERTON (as solicitor to the company) addressed the meeting at considerable length; but as he did not advance anything which was novel, but simply repeating the oft-told tale, it is unnecessary to follow that gentleman through his speech, which was more than once interrupted; suffice it, that we refer to the main features presented. He stated that a call had been made unanimously at the meeting held on 28th July, 1848, which, however, had not been responded to.—[Col. BAINES: It was under false representations.]—Such meeting had been adjourned from time to time until the month of December, when it was suggested, indeed by himself, that arrangements should be made with the dissentients, with the object of putting an end to legal proceedings. Such was concurred in by certain directors who then formed part of the board, and who acted with the dissentient shareholders—in consequence of which, arrangements were made with Mr. Burls and party, whereby they withdrew from the concern, transferring their shares, and paying over to the company a certain sum. These shares, on which 25,000*l.* had been paid, might be re-issued by the company; and, therefore, would, in fact, be a bonus, if such shares were disposed of at a premium, or even at par.—[Col. BAINES expressed his dissent and protest as to the shares in question being the property of the company, or accepted by them.]—He (Mr. Elderton) continued by observing, that all that was required was raising a sufficient sum to liquidate the pressing claims on the company, which was indispensable, as, should not such be met by the body of shareholders at large, the consequence would be that individuals would be selected and pounced upon by the creditors; hence it was highly desirable that some measures should be adopted for the general benefit, and a system of unanimity prevail, without which much injury would arise to all parties. The railway transit was, perhaps, one of the most important features to which attention should be directed. The distance from the colliery to join the South Wales Railway was only one mile; but the line was not completed to Swansea—there being five miles. Negotiations were then in course with the directors of that company, who, not having the means to prosecute the works, had expressed their readiness to meet parties, and give them sufficient security for an advance of 50,000*l.*, which he (Mr. Elderton) hoped might be effected, certain measures having been adopted to secure such object. In such case the outlay required would be comparatively insignificant; but, assuming that such could not be done, then the alternative presented was that of making a line to Llanelly, a distance of 2½ miles, which could be made without requiring leave from the tenants on the estates, as a greater portion belonged to the company, as to right; and the Duke of Beaufort had also expressed his readiness to grant leave of way. Docks were there constructed, and a large quantity of coal was in course of shipment. He believed that a sum of 1500*l.* to 2000*l.* would be ample to form a junction with the South Wales line, should such be continued on to Swansea, or 3000*l.* would be ample for the line to Llanelly; and, in the latter case, such amount would not be required at the moment. He would suggest rather, than, that the directors should enforce a call, which was far from their wish; that a sum should be subscribed by certain of the more influential shareholders, at a given rate of interest; and certain of the directors and others had already expressed their readiness to act on this suggestion, and had accordingly subscribed their names—the amount so advanced being first repaid before any division of profits.

Colonel BAINES had lost all confidence in the concern and its management; on embarking in the undertaking he had put faith in the prospectus; this was somewhat more than 12 months since, when 6*l.* per share had been paid, and when he was given to understand no further call would be required. The report presented to the meeting nullified such representations put forward in the prospectus, inasmuch that debts now existed to the amount of 26,000*l.*, and there being only 4000 shares, or thereabouts, as he understood from the secretary, with 7*l.* paid on the shares, and which were fixed at 10*l.*, a call of the remainder would not liquidate one-half the present claims, not to advert to the current expenses. The prospectus, again, held out that 120,000 tons per annum might be raised, without stating for what period; whereas the present report confined it to 70,000 tons per annum, limited to three years, from the present workings, without a new winning or further capital was outlaid. Indeed, he could not see how the concern could be carried on; was it to be supposed that 57 shareholders would have given up, indeed sacrificed, a sum of 25,000*l.* without they had first satisfied themselves that the concern held out no prospect of returns? He had been given to understand parties holding 30 to 50 shares had paid 500*l.* to 800*l.* to rid themselves of liabilities; and one person (Mr. Sherman, as we understood) had paid from 6000*l.* to 8000*l.* He considered the course to be pursued was that of winding-up the concern.

Mr. ELDERTON contended that the company could not be wound up.

Mr. WHITE observed, that there was owing, as appeared by the accounts then before him, no less a sum than 37,000*l.* on account of purchase money, which, he admitted, was payable out of profits, but besides which there were cash items of 26,779*l.*, which must be found by the shareholders; this was no trifle as divided over 4000 shares; and although the secretary stated that the bonds (8000*l.*) would stand over for five years, and that the pressing claims were comparatively small; yet one thing was quite clear—these payments must be made one day or other, while expenses were meanwhile going on. He would suggest, as the directors had placed the value of the property at 154,000*l.* in the balance-sheet, it would be well to deal with Colonel Cameron, or the vendors, and sell to them the property at a comparatively insignificant sum.

Mr. STRELLEY would wish to offer a passing remark. His friend, Mr. Smallbone, whose avocations precluded him from remaining throughout the entire proceedings, had brought in, or *let* in, numerous friends; he had taken every measure for satisfying himself of the value of the property. That gentlemen held very largely, as also did his family and friends. He (Mr. Strelly) had been lately at the colliery, and had been assured by all the members of the Cameron family that the property was highly valuable. Indeed, that was the universal opinion entertained; he was well aware that they had ever been working at a loss. Had the company husbanded their resources—but, unfortunately, the colonel wanted money, and had grasped at all he could get—he had no doubt they would now have been in a very different position. The colliery was good, and only required capital, with good management. Mr. Strelley proceeded to observe, that he considered the concessions said to be made by Col. Cameron, were, in fact, none; but, if he (Col. C.) would meet them fairly, he then thought that a further sum of 10,000*l.* would effect all the objects they had in view.

Col. BAINES having adverted to the heavy charges for salaries, Mr. HOWDEN explained certain reductions that had been made, and expressed his readiness to reduce his amount four-fifths—he (Mr. Howden) holding a large interest to the extent of 3000*l.* in the concern, and, therefore, was interested in its prosperity as a shareholder, rather than as a paid officer.—This proposition was received kindly by the meeting; but the general opinion was, that every labourer was worthy of his hire.

Mr. HOWDEN proceeded to observe, that 78,000 tons a year, or 1500 tons a week, could be readily obtained from the collieries—such estimate being founded on the reports of Mr. Dagleish, and other eminent coal viewers, which, if taken at a mean profit of 2s. 6d. per ton, would give a revenue, or surplus profit, of 10,000*l.* per annum, allowing for royalty of 1s. per ton, which, assuming such quantity to be raised and sold, would, as a matter of course, waive the dead rent of 2000*l.* a year, which was now payable. Against this income of 10,000*l.* a year, he would set interest at present payable 255*l.*; that on 15,000*l.*, the sum proposed to be raised, which, at 6 per cent., would be 900*l.*; interest on bonds, 400*l.*; and the establishment as reduced, 1200*l.*; so that the outlay would not exceed 3000*l.* per annum—thus leaving a surplus of 7000*l.* as available profit, either to meet the liabilities of the company, or to be divided among the proprietary.—A general conversation took place; and the proceedings of the meeting were brought to a close, of which we will endeavour to give a digest. At present, the directors were only four in number—the qualification being the holding of 30 shares; but only 15 or 16 were eligible. In the end, Mr. Smallbone, who had withdrawn from the meeting, was elected to fill one of the vacant offices—Col. Baines, Mr. White, and Mr. Fisher, who were requested to take office, having declined so doing.

Mr. ELDERTON repeated, that the debts must be paid. He had exercised to the full extent his ingenuity to postpone the period; but after the several excuses made, and pleas advanced, for non-performance of promises, he felt that the moment had arrived when the shareholders should consider the course they would pursue. He would recommend an advance of money by way of loan, to which certain directors and shareholders were ready to subscribe. If that was not done, some other means must be resorted to for the purpose of meeting their engagements: 1500*l.* at least was essentially necessary; and there was no mistake that money must be had.—A question having been put to the learned SOLICITOR, as to the case brought into Court by Mr. Darnford, the result of which was that the company were "worsted," that gentleman stated that he cared not for the decision arrived at by Lord Denman. The learned judge had evidently mistook one clause for another; and an application would be made to the Court to "rescind the verdict," which we presume means an application to the bench, and not a mere motion for new trial, on account of misdirection of the judge.—Mr. ELDERTON proceeded to read a resolution, to the effect that the directors should be recommended and empowered to borrow money to pay the debts of the company, which, having been moved by the CHAIRMAN, and seconded by Mr. WHITE, was carried with a protest on the part of Col. BAINES, who contended at length that the shareholders who had signed off their shares were still liable.

It was moved by the SECRETARY, that Mr. Smallbone be elected a director, which motion was carried, Col. BAINES protesting against the proceedings.—Mr. W. Wellington Cooper having been elected as an auditor, in the room of Mr. Burls, and a vote of thanks being given to the chairman, the meeting separated.

The following is an abstract of the accounts submitted to the meeting, on which we have observed in another column:—

The balance-sheet made up to the 30th June, showed on debit side—Subscribed capital, 7*l.* per share on 19,946 shares, 139,742*l.*; less arrears due, 2257*l.*, or a sum of 137,485*l.*; sundry creditors—viz.: bonds 8000*l.*, bills payable, 7350*l.* 17s. 9d., sundries 6428*l.* 12s. 8d.—21,779*l.* 11s. 5d.; amount due purchase of the colliery on balance of account, 42,772*l.* 16s. 4d., of which there is payable in bonds, 5000*l.*: leaving a balance payable out of the profits of the company (a moiety of which is to be set aside for its liquidation), of 37,772*l.* 16s.—making together a total of 202,037*l.* 7s. 9d.

The following is an abstract of the colliery working account from 30th June, 1848, to 30th June, 1849:—On the debtor side is stock on hand 30th June, 1848, 4676*l.* 19s. 1d.; cutting, 777*l.* 3s.; horse keep and stable expenses, 1460*l.* 19s. 7½d.; shipping and wharf expenses, 334*l.* 11s. 5½*d*; royalty, 2000*l.*; salaries, taxes, and general trade charges, 620*l.*: together, 10,482*l.* 13s. 10d.—and on the other side credit is given for sale of coal, 2156*l.* 16s. 9½*d.*; rent, 1*l.* 16s. 6d.; and balance of 8324*l.* 0s. 6½*d.* is carriedto profit and loss account, making 10,482*l.* 13s. 10d.

On the credit side, the mining property, including plant, &c., is set down at 150,000*l.*; from which is deducted, plant included in working stock, &c., 2000*l.* —leaving 148,000*l.*; to which is added, working stock and permanent works, 36666*l.* 7s. 6d.; wharf at Swansea, 3215*l.*; law and parliamentary expenses incurred in obtaining the Act, exclusive of law charges due, but not embodied in the balance-sheet, 6254*l.* 8s. 10d.; engineering expenses, 2637*l.* 2s. 6d.; sundries, 21*l.* 13s. 4d.; office furniture, 328*l.* 2s. 2d.; cash in hand, 682*l.* 3s. 9d.; balance to debit of profit and loss, 37,232*l.* 9s. 8d.—making 202,037*l.* 7s. 9d.

Profit and Loss Account, from June 30, 1848, to June 30, 1849.

Sundry debit balances standing open in the ledger on the 30th June, 1848, now transferred—viz., Preliminary expenses, consisting of royalty, &c., to June 30, 1847	£9309	14	11½
	2200	0	0
Royalty	1973	3	2
Direction	1528	11	5½
Salaries, 1426*l.* 3s. 7d.; taxes, 102*l.* 7s. 10½*d.*	3547	11	11
Interest	1681	16	9
Expenses	175	3	1
Dividends due	£20,416	1	4
	1,604	4	3½—18,811 17 0½
Less balance of profit and loss account			7,280 15 11
Difference of cost of permanent works, &c., and present valuation			3,607 15 7
Interest			1,655 5 7
General trade charges			1,276 5 10
Direction, 518*l.* 3s.; salaries, 758*l.* 2s. 10d.			670 19 7
Loss on sale of ship *G. Robinson*			25 0 0
Suspense account			8,324 0 6½
Balance of colliery working account			£41,652 0 1
Total			
Contributions from shareholders, in consideration of being allowed to transfer their shares	£5713	7	11
Less expenses incurred in recovering call, and other incidental expenses	1293	17	6—4,419 10 5
			37,232 9 8
Balance			£41,652 0 1
Total			

KOLLMANN'S RAILWAY LOCOMOTIVE COMPANY.—The Master in Chancery (Kindersley) has just made a peremptory call of 12*l.* per share, under the powers of the Joint-Stock Companies Winding-up Act, on the shareholders in this concern liable to become contributors, to defray outstanding claims. The undertaking was started in 1845, with the intention of traversing railway curves of "any radius," and of ascending inclines "hitherto impracticable." The Dean of Hereford was chairman, and the proposed capital was fixed at 10,000*l.*, in 500 shares of 20*l.* each; deposit 2*l.* per share. Considerable sums were paid for the patents, and brevets of invention were granted for the continent. Two years passed, in the course of which nothing was done beyond the spending by the provisional committee of 4000*l.* of the deposit, besides borrowing other moneys. The official manager now reports, that there are no assets, but claims to the extent of 2000*l.*, which the 12*l.* call will go to liquidate; and should it not be paid before the close of the month, bailiffs will be abroad to enforce it. The master having placed the assignees of a bankrupt on the list of contributors as liable, they are about to appeal to the court on his decision.

DREADFUL BAD LEGS CURED BY HOLLOWAY'S OINTMENT AND PILLS.—Extract of a letter from John Eastman, Esq., of Buenos Ayres, dated 3d April, 1849.—"To Professor Holloway.—My dear Sir: Your pills and ointment are in very great repute here, and many wonderful cures have been performed by their use—one in particular I will relate. A Portuguese farmer, who had been confined to the house with sore legs for more than five years, which rendered him quite incapable of following any kind of work, is now so perfectly cured by the use of your pills and ointment, that he can follow the plough and attend personally to the most laborious farming occupations."—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London. 42

THE PRINCIPALITY OF WALES

BRIEFLY CONSIDERED, WITH REGARD TO ITS PHYSICAL FEATURES, SOCIAL CONDITION, AGRICULTURAL CAPACITIES, GEOLOGICAL STRUCTURE, AND MINERAL RESOURCES.

BY JOSEPH HOLDSWORTH, ESQ., M.G.S.F., &c.

[Continued from last week's Mining Journal.]

Nature—as in the outset we have partially endeavoured to show—has adorned this diversiform territory with much of her nobler features and most fascinating outlines of beauty; man, however, has as yet, comparatively speaking, done but little towards filling up the general picture, by those tasteful dispositions and captivating operations of art which are commonly observable in the landscapes of a diversified and long civilised country. Though in instancing, as a very general rule, the paucity of country seats and mansions, with their smiling appliances, the scantiness of the foliaceous robe, which in some extensive districts amounts to an entire or almost total absence of timber, or even brush-wood, the plain ungarnished character of the farmsteads, and the sombre primitive aspect of most of the towns and villages, as alike presenting indubitable evidence of that *stationary* unaspiring disposition, which, as above intimated, has so long characterised the inhabitants, we must not be unmindful that there are many charming exceptions, many a sweet sequestered spot and ever-changing tract of hill and dale and mountain-land, fraught with the most striking intermingling of the soft and the grand; pastoral slopes and rocky heights, bright green pastures and browny heaths; that here and there, too, venerable woods clothe the steep acclivities, and the sunny vistas of some well appointed mansion are occasionally to be observed peeping out from their darkening masses. Within the last few years a very fair sprinkling of pretty modern villas, castellated residences, and rusticated cottages, in good taste and keeping with the surrounding scenery, have sprung up in some of the more habitable districts of the country. Eccentric or romantic strangers are not unfrequently their occupants, though more commonly they are inhabited by their Welsh proprietors, many of whom, having realised their hopes in other lands, have returned with the fruits of their industry and enterprise, thus to contribute to the decorative beauty of their native hills, and spend their remaining years amongst them in respectable and tranquil seclusion. The resident gentry are much given to hospitality, and their establishments are very commonly marked by a profuse and generous mode of living, which, while it fosters the genial glow of social intercourse, gladdens the mountain solitudes, and does all honour to the broad and diversified acres of the mansion. Though the Welsh, as a nation, may still be said to have their best energies held in humiliating thraldom by very limited and straightened means, the local systems of fraternity which have existed for centuries amongst them effectively prevent those appearances of squalid poverty and destitution, so much to be deplored in the other great divisions of the English nation.

The cotters and smaller tenant farmers of this more or less intractable country are a plodding, contented, and industrious race; and, though generally poor, have nothing to complain of in the shape of creature-comforts—in fact, their internal economy commonly evinces much substantial enjoyment, certainly an ample supply of wholesome and nutritious diet; and it should be stated, that many of the occupiers of the extensive mountain sheep-walks are very wealthy. Despite, however, the most diligent and careful management, the holder of the cold, hilly arable tracts of land very rarely accumulates an amount of capital sufficient to enable him to adopt a system of efficient cultivation, and for the want of which their natural capabilities are scarcely *one-half* developed. In no branch of their rural economy is this assertion more palpably demonstrated, than in the deplorable neglect of *under-draining*, almost everywhere apparent throughout the cultivated tracts of the principality. Comparatively scanty, in general extent, as are its meadow and other low lands, and consequently of increased value to the occupant, they are, nevertheless, almost invariably saturated with superabundant moisture, and, as a natural consequence, covered by a coarse mossy turf, or thickly overrun with rushes. This is particularly the case throughout the cold clayey tracts of Glamorganshire, even where the undulating surface affords every facility for thorough drainage, and where the system of *wedge-turf draining* (apparently not understood in Wales) might, on such strong argillacious soils, be nearly as permanently and as effectively employed as the more expensive tile or stone drains. But, whilst the divesting soils of their superfluous moisture is incontestibly amongst the most indispensible desiderata of good husbandry, *irrigation* has no less claims to consideration, as an inexpensive, natural, and powerful fertiliser; and we have often felt surprised, that in a country like Wales, where the supplies of manure are so inadequate to the requirements of the land, but where innumerable mountain rills offer every facility to the operation, that it is so little resorted to. The great pains taken, generally, by the agriculturist of the continent, to appropriate every little streamlet he can command to these purposes, sufficiently attests his full appreciation of the system. By these simple means, periodically applied, he clothes the barren acclivity with exuberant verdure, and covers the mountain vale with a dark green mantle of the richest tissue and most luxuriant appearance. We have, indeed, witnessed irrigation practised with the happiest effect in the large winding vallies of central France; and the small collateral ones that penetrate the bordering hills, in the picturesque vales which cleave the table lands and rugged cevennes of the southern departments, and in the extensive depressions of varied fertility which furrow the stupendous basements of the lofty Pyrenees; as also along the skirts of the Alps and Appenines, and especially in the expansive plains enclosed by those magnificent ranges, where irrigation is the chief contributor to that rampant and luxuriant vegetation, the general aspect of which has so long entitled the Lombardian territory to be considered one of the richest and most productive in the world.

It has been well observed that, he who possesses on his estate the three earths—clay, sand, and lime—of a good quality, with facilities for drainage, or irrigation, has all the materials for permanent improvement, the grand desiderata in agriculture being to render wet lands dry, to supply dry lands with sufficient moisture, to make adhesive soils loose, and loose soils sufficiently adhesive. The intermixture of soils, where one kind of earth is either redundant or deficient, is, in fact, very commonly practised with the greatest advantage in some instances, as in marl or chalk to sandy soils, superseding the necessity of manure, and in others rendering, when liberally applied, the most barren gravelly soils productive, where the most plentiful applications of manure have been found useless or injurious. The soil of the southern, or rather more central, districts of Wales, being for the most part in tillage, and reposing immediately on the slate formations, is of a loamy friable quality, and though not rich (as it contains less silex and a more equal admixture of the earths favourable to vegetation), possesses much natural fertility, which, if duly aided by those improved means, restoratives, and stimulants, science and the advanced state of agriculture now knows so well how to employ, and to which the local agricultural societies are already happily directing their attention, the waving cereal produce of these Welsh hills might be brought to vie with some of the best highland districts of England. We could, in fact, adduce examples of some few highly cultivated farms, which would fully bear us out in this opinion.

In South Brittany there are certain tracts of land, especially the most recently cultivated, situated on the same slate formations, which even without manure and very little labour, produce excellent crops of corn, chiefly attributable, however, to the fact of their being composed of as yet but young or virgin soils. And when we turn to the extensive districts on the slate ranges of Wales, which are still in a state of nature, and sometimes almost profitless desolation, we cannot but be forcibly reminded, that by the judicious application of industry and capital, they might readily be transformed into many a "happy valley," and be rendered subservient to the permanent employment of a large and valuable population. There are, certainly, for instance, in some parts of Cardiganshire, Montgomeryshire, Merionethshire, Carnarvonshire, &c., tracts so very elevated and sterile that, perhaps, they can never be more advantageously appropriated than, as at the present period, by the depasturage of immense flocks of the small mountain sheep, &c., and we sincerely wish we could add the ALPACA, whose naturalisation in this country may now, from several experiments lately made in Scotland, be said to be a matter of absolute certainty. These interesting and useful creatures are found not only to be much hardier than our sheep, but manifest the most indefatigable perseverance in searching for food, where sheep would, to a certainty, starve. Perhaps some of the landed proprietors of Wales, acquainted with their economical importance, may be induced from this hint to introduce them on their native mountains. A company is at this time being formed in France for the purpose of naturalising the alpaca in that country. But to return from this digression, we would be understood more especially to allude to those vast, treeless, unreclaimed slopes and valleys, intersecting the mountainous parts of Brecknockshire, Radnorshire, Montgomeryshire, Merionethshire, &c., and which, in many instances, might be shown to be susceptible of profitable amelioration. Their lower extremities particularly, are, for the most part, composed of deep beds of alluvial soil, admirably adapted for the growth of forest trees, which, if skilfully disposed in clumps and belts, would not only give shade and shelter to the new enclosures, but impart a genial beauty and amenity to the country and the climate.

As there are nothing like actual examples for uprooting prejudices and enforcing conviction, even amongst the most opaque bipeds, we may be excused adducing here two or three in point. We recollect having, some few years ago, been much struck with the fertile productive appearance presented by many an isolated tract in the Scottish highlands, and being not unfrequently situated on the acclivities of arid mountains, or amidst the wildest and most intractable boggy wastes, were evidently filched by the indomitable perseverance and industry of man from some of the most forbidding and apparently unconquerable dominions of Nature. Fencing, *draining*, delving, and *sheltering*, had effected these good and important works of reclamation. In the north of Aberdeenshire such improvements are constantly carried on by almost every farmer; but the principal have been the result of a number of poor families, located on various pendicles of what was once a vast and unprofitable surface of moor and moss. In one instance, where a colony of this kind had been for some time located in that neighbourhood, we are assured by a gentleman who professes to have had many instances of witnessing their exertions, that the parents of 29 families, containing 156 individuals, who would otherwise have been held down in the most abject poverty, or been eventually thrown as burdens upon their respective parishes, have been enabled to bring up their families in comparative comfort, and look forward to comparative independence under the approaching infirmities of age. In Ireland, we have it stated on good authority that "Mr. Stuart French, of Monaghan, has reclaimed 300 acres of mountain land in four years, and raised its value from 2s. to 35s. an acre, and the entire cost was repaid by the crops in three years. Mr. Reade, of Wood Park, Galway, reclaimed 500 acres of moor land and mountain; the cost was repaid by the crop of the second year; and the land formerly worth 2s. 6d. has since paid 20s. per acre; and there are 128,000 acres of such land in Galway. In the county of Cork Mrs. Coulthurst reclaimed a bog farm, for which the tenants could not pay 4s. per acre, now rated at the value of 4*l.* per acre.

Now, if such things can be done with the bleak, wet, stony, and elevated wastes of Ireland and Scotland, and especially so far north as Aberdeen and the highlands—in which latter country numerous examples might be cited where the rental of parishes has increased fourfold since the beginning of the present century, by the reclaiming of wastes, and where lands which did not yield one farthing to the owner, now return him a rental of 1*l.* to 2*l.* 10s. per acre,—what may we not reasonably expect to accrue from a similar system of reclamation and improvement being pretty generally adopted in the open, untouched, but cultivatable districts of Wales, where the physical obstacles are, on the whole, less formidable, and the climate much more genial? In concluding these few general remarks bearing on the rural economy of the country, we would especially recommend to common consideration, the adopting of a system of *thorough draining* and *judicious planting*, as being therein not only the most palpable requisites, but the first, most important, and potent instruments of an universal improvement and renovation; and though it may require no ordinary application of skill and enterprise, time and means, before the tributary, or partial, undertakings of this industrial character will be very visibly manifested in the general beneficial realisations and aspect of the principality, or any very effective influence over the happier destinies of its community can thereby be achieved; it is, nevertheless, of the utmost moment that, in the performance and progress of any such really national improvements, individual endeavours should ever be steadily directed to the objects and channels most eminently calculated to bring about great and glorious results. And as years roll on, and human efforts, single or combined, gradually conquer those difficulties and impediments which Nature, in her ineffable wisdom, submits to the talents and industry of man, she will assuredly not fail, in due course, to make the most generous returns—insensibly yielding up her bounteous gifts, till the whole land teems with captivating glories, and her inexhaustible treasuries are spread before universal man, as the recompense of his toil, and the indubitable consequences of well directed perseverance, enlarged knowlege, and a high state of civilization. For the information of the amateur botanist, we may here just observe, that the higher ranges of Welsh mountains present, like those of Scotland and Cumberland, quite a peculiar vegetation—one in every way different from that of the plains of England; and while analogous to that of Switzerland, offering a still more striking resemblance to the Flora of Lapland, Iceland, and Greenland. The whole being by the learned naturalist designated the "Boreal Type."

In directing attention to the unemployed soil of the principality, our great object has been to show that, if duly subjected to the magical operations of labour, skill, and capital, it will eventually prove a mine of productive wealth, positively equivalent to the golden *placeros* of California! At the same time, it should be remembered that there are many most extensive tracts, in its wilder and more mountainous divisions, where necessarily we must ever look in vain for the triumphs of labour—spots where naked rocks lay claim to everlasting dominion—localities where withering blasts and arid heights alike conspire to extinguish the last and lowliest efforts of vegetable life—regions, too, spreading far and wide, which, defying the best efforts of the cultivator, must ever remain exclusively devoted to the depasturage of goats or mountain sheep. These deteriorative exceptions, however, all-bounteous Nature has most superabundantly counterbalanced by storing the whole country with subterranean riches that may well be deemed inexhaustible!

In taking a cursory survey of these vast and various repositories of mineral wealth, we may recommence our investigations on the southern borders, and progressively extend them to the northern extremities of the principality. The magnificent coal-field, trending along the shores of the Bristol Channel, over an extent of nearly 100 miles in length, and having a variable breadth of from 5 to 20 miles, first claims our attention. The area of this coal-field is estimated to be 1055 square miles. Within this vast tract, 64 seams, or veins of coal, have been proved to exist—having an aggregate thickness of 190 ft., and embracing all qualities, from extremely bituminous coal to pure anthracite. The denudated valleys which intersect this coal-field are deep and numerous, and the strata are also much broken by faults. The natural facilities, indeed, afforded both for obtaining and disposing of its valuable contents, are rarely equalled. The veins of coal and argillaceous ironstone, the latter, sometimes amounting to 16 in number, are not unfrequently so situated as to be easily worked by adits or levels; and it is affirmed that the coal can be shipped at the ports of Newport, Swansea, or Cardiff, at about the same rates as the coal in the Tyne and the Wear.

There is much coal here of an inferior quality—it varying greatly in different parts of the field; but, on the whole, it appears, according to experiments, that the useful and evaporative qualities of the various veins considerably exceed those of the Yorkshire, Newcastle, Lancashire, and Scotch coal-fields. Though the mining operations in this vast extent of coal formation may be said to be in their infancy, and its mineral treasures, comparatively speaking, nearly unwrought, the present annual consumption is estimated by Mr. Richardson to be as follows:—In the ironworks of South Wales, 1,500,000 tons; in the copper works, 300,000; in the tin-plate and other works, 200,000; in agricultural and domestic uses, 1,000,000; and in exports, 1,500,000—making, together, a total consumption of 4,500,000!—an amount of destruction which, considered prospectively, with regard to the growing increase of demand, may well excite our apprehensions that this grand storehouse of Nature will be exhausted at no very distant period. However, but a glance at the magnitude of its carbonaceous contents goes far to dispel these fears; and when we attempt calculations on the data already obtained, we are compelled to acknowledge that no definite limits can well be assigned to the duration of the supply. Mr. Bakewell, the eminent geologist, computed, some 16 or 20 years ago, that the South Wales coal-field would supply England with coal for 2000 years after all our English coal mines are worked out; but at that period it appears that the 23 known beds of workable coal made together but 95 feet in thickness, which Mr. Bakewell calculated would yield 100,000 tons per acre, or 65,000,000 tons per square mile; whereas, as above intimated, there are now 64 seams discovered, possessing an aggregate thickness of 190 ft., which, if not exceeded, is probably maintained throughout the greater portion of the 1100 or 1200 square miles comprising the surface extent of this noble coal-field. What a teemful source have we, then, here alone of national prosperity!—a very fountain of incalculable wealth, which, since the auspicious day its seal was first broken, has never ceased to pour forth a magic stream, gradually increasing in volume and importance, diffusing itself over the barren and thirsty lands in ten thousand fertilizing rills, awakening the spirit of industry, amply rewarding manual labour, and imparting impulse and success to commercial activity and enterprise.

Indeed, the increased and acceleratory value of landed and vested interests, and the vastly advancing importance of the local towns, bear ample testimony to that progressive and general prosperity which has already resulted from the development of the mineral treasures of Glamorganshire. While Swansea has arisen into a handsome town of some 18,000 inhabitants, its immediate vicinity presents one universal scene of industrial energy and bustling competition, pleasingly and instructively exhibiting the power and utility of the resources entombed in the adjacent hills, when brought to bear on the skill and intelligence of the British manufacturer. The principle features of these operations are the immense establishments for the smelting of copper, the brass and tin works, and the extensive potteries. And not only are great quantities of coal, iron, and lime exported from Swansea, but the quays are almost constantly burdened with large heaps of copper-ore, &c., brought from the distant shores of Cuba, Chili, and Australia, to be smelted in the neighbouring furnaces.

Then, again, if we turn to Merthyr Tidvil, on the north-eastern borders of the coal-field, we shall find that this town, which was but an insignificant village towards the middle of the last century, has rapidly become the largest town in the county, now numbering upwards of 25,600 inhabitants. Its increase and prosperity have solely emanated from the vast mines of coal and ironstone existing in its surrounding neighbourhood. Owing to the facilities thus afforded for smelting iron, most extensive works have been erected here, and to which the rich hemetitic iron ores of Devon, &c., and the black specular ores of North Wales, are brought by the canal from the port of Cardiff. It is computed that, altogether, about 160,000 tons of iron are annually produced in the immediate vicinity of the town. The coal-measure ironstone yields upwards of 30 per cent. of metal; but the imported iron ores are much richer, yielding from 60 to 80 per cent. of metal; and it would appear that much of the coal here is peculiarly adapted for their reduction, and which, in fact, to make good iron from the best ironstone, should be as free as possible from every substance with which sulphur is combined, as well as possess the property of forming a hard coke. It were unnecessary here to cite further evidence of the extent and importance of the mining operations in this extensive coal-field—that already adduced, abundantly attests this; and it must be obvious to all, that wherever such works are duly opened, they cannot fail, according to their extent and character, to produce analogous effects, pregnant with substantial good, and abounding prosperity.

The South Wales coal-field is geologically based on mountain and transition limestone, massive ranges of which may be seen traversing the western edges of the coal-measures, and a narrow belt of the latter extends from Carmarthen to Wenlock, in Shropshire. These calcareous deposits repose in turn on the Silurian and Cambrian groups of slate-rocks, (occasionally appearing amongst them) which occupy so large a portion of Southern and Central Wales. The former is chiefly composed of the grauwacke series, passing into the old red sand stone; whilst the latter, the lowest in which organic remains are found, is of a more homogeneous, compact, and crystalline character, affording the best material for roofing slates, &c., of which we shall presently have occasion to speak. These great slate formations are regarded as the most metalliferous rocks; they contain nearly all the principal metallic ores found either in beds or veins, lead and copper being the greatly predominating metals. The mountain limestone is richer in lead, but the lead ore in slate rocks contains a larger portion of silver; 30 ounces to the ton is here, perhaps, about the maximum, but in some of the mines scarcely a trace of silver is to be found.

A variety of mining operations, more or less successful, are partially interspersed throughout the extent of country which these transition formations occupy in the principality; but the more important group of lead mines is situated in Cardiganshire, where, indeed, the eminently successful results of some of the ancient workings, and especially those conducted by Sir Hugh Middleton, &c., in the neighbourhood of Aberystwith, obtained for this division of the county the enviable *soubriquet* of the Welsh Potosi. Notwithstanding, however, the tempting character of this metallic repository, the spirit of enterprise appears to have fled from it for a long series of years; the local landed gentry and their dependents would seem to have preferred drawing, however slowly, their resources from the surface soils, amid truth and daylight, to that of groping through regions of dubiousness and darkness for subterranean wealth, and which, indeed, appears destined to be developed chiefly by the more adventurous alien, bringing skill or capital to the undertaking. Little more than 10 years have elapsed since a party of experienced Cornish miners commenced reopening some of the long dormant mines of Sir Hugh Middleton, and their subsequent labours have been attended with such fortunate results, that they have tended to give considerable impetus to mining in Cardiganshire; where, to say nothing of the many discoveries of ore, there are about 80 lead mines, all of which have been more or less worked at some distant period, though at present there are not above a score of them in active operation. Of the history or value of the remainder absolutely nothing is known.

The clay-slate formations in which these mines are situated constitute a high barren mountainous tract, the strata composing them are much contorted, incline towards the horizon at a very high angle, and are not uncommonly thrown into a vertical position; they are of a very shivery nature, often much traversed with iron shot fissures, and are sometimes interstratified, as in a narrow zone adjacent to the sea, with thin stony beds. The lead veins, or lodes, by which they are intersected, are often traceable on their line of direction to considerable distances, being commonly strong and well-defined, and running nearly north-east and south-west, but are not unfrequently subject to undulations and deviations from the straight line. The ore is often found very near the surface, and, as is usually the case with metallic veins, increasing in richness as the lode descends. Some of them have proved very productive—a mine worked in one, on the property of the Earl of Lisburne, at the present period, not uncommonly yields upwards of 100 tons of lead ore per month. Several parallel lodes have already been discovered in this county, and the mere fact alone that but very few mines have as yet been opened on their respective courses, suggests the belief that an invaluable field here presents itself to the researches of the mineral explorer. It would be incompatible with the limits of this article to enter into further particulars respecting the more productive mines now in full working, in order to exhibit the truly important character of the present mining operations of the above-named Potosian district; but a tolerably correct idea may be formed thereof, when it is stated that the lead ore brought from the *neighbouring* mines, to be shipped off at the port of Aberystwith, amounts, on the average, to above 400 tons per month, or about 5000 tons per annum, independently of some inconsiderable exportations of copper ore for Swansea. The quantity of ore produced here would, as in many other parts of Wales, be greatly increased, could adequate machinery be erected.

[To be concluded in next week's Mining Journal.]

IRISH BOGS.—A letter appeared in the *Times*, from Mr. H. J. Baylee, county Clare, in which that gentleman states, "bog" land can be reclaimed, and brought into bearing at a cost of 7*l.* an acre; some which he had himself reclaimed yielded for the first crop 10*l.* an acre, the second for potatoes 40*l.* per acre (although, in ordinary years, only 20*l.*), the third 6*l.*, and it appears there is now growing on the bog a crop of potatoes worth 20*l.* per acre—thus, for an outlay of 7*l.*, all expended in labour, a return of 10 times the amount has been made in the short space of four years. This instance should afford sufficient encouragement to the landholder and capitalist, as well as to the Government, to adopt the system so successfully carried out, and which must be so conducive to the benefit of the sister country.

A STREET PAVED WITH GOLD.—The San Francisco correspondent of a New York paper, gives the following story:—We had a very interesting gold fever on a small scale a few days since, in the very midst. It seems that some keen-eyed genius, in travelling through one of the streets, saw lying on the ground a piece of gold. Stooping to pick it up he observed some more, and as he still continued at his occupation, all the greehorns soon gathered around him. In half an hour the whole street was lined with gold seekers, and, strange to say, all were finding some. Yes, there lay the "yellow mica" scattered in our very streets. The eager crowd soon attracted the attention of our citizens, and a variety of opinions were, as is usual in such cases, expressed. Many became quite enthusiastic, declared that San Francisco was resting on a gold mine, and threatened to bring pickaxe and shovel, and dig, to the great detriment of the public streets. One man did actually do so, but after wheeling his dirt and finding nothing in it, gave it up. The knowing ones soon solved the mystery. The fine particles of gold can be found in every street, and are the sweepings of the stores where gold is taken in exchange for goods. The excitement has died away, and the town has assumed its usual quiet—if there is any such thing as quiet in San Francisco.

Mining Correspondence.

[The Commissioners of Inland Revenue having notified to us their resolve to charge with advertisement duty all reports having the agents' names affixed, we appealed to them in a memorial, setting forth that we, or the respective companies, derived no advantage therefrom—the only object sought, or obtained, being that of affording to the mine adventurer and public the greatest guarantee we could for the truthful and *bonâ fide* nature of the statements periodically set forth, by authenticating them, and thus fixing a responsibility on the writer. The Commissioners have replied, that "the reports, with names attached, are advertisements, and that duty will be charged thereon." We have no alternative but submitting to their dictum. How far the Commissioners are correct in the view they take, our readers can judge as well as ourselves;—we can but hope that, on reflection, they will see the error into which they have fallen, and rescind the orders they have issued. All reports inserted under this head, however, may, as heretofore, be considered as furnished by the regular agents of the company; and we shall carefully guard against the publication of statements which cannot be relied on as correct.]

BRITISH MINES.

BARRISTOWN.—We are driving east on a branch of the lode (mixed with lead, and about 2 in. wide) east of the slide, in the adit level. We are stoping the back of the 16 fm. level, which has improved greatly since we commenced; it is now producing a half-ton of lead per fm. We have also commenced a winze in the bottom of the adit level, at the extreme west of our workings, at Nangiles; the lode in it is about 20 in. wide, thinly mixed with lead. The pitches in the back and bottom of the adit level continue to look pretty well, producing from 6 to 10 cwts. lead per fathom. We shall have a cargo of 20 to 25 tons ready about this day month.

BEDFORD UNITED.—At Wheal Marquis very little has been done in the 108 fm. level, east and west of Bailey's winze, the men having been engaged cutting ground for barrow road, and dressing the lode. Crews's winze in the 90 fm. level remains suspended for the present. We continue to drive by the side of the lode in the 90 fm. level east. Reynolds's winze, in the 80 fm. level is stopped, owing to quick water. In the 70 fm. level east, the part of the lode carrying is about 2½ ft. wide, and 2 tons of ore per fathom.

BLISLAND CONSOLS.—We have driven this last week 2 fms. 3 ft. through a congenial strata of granite; it stands without timber, and we have now commenced rising to surface for air, and to bale the stuff. We have been dialling the ground for the purpose of marking out our leets, and shall commence the wheel-pit early next week; we have seven men in the adit, and are pushing to hill with all speed.

BRYN-AR-IAN.—The lode in the 10 fm. level, east of the shaft, is improved within the last few days, now yielding 12 cwts. of ore per fm. The stope in the back of the adit level, east from the shaft, produces about 1 ton of ore per fm.; the stope in the back of the same level, east of the winze, is yielding 15 cwts. of ore to the fm.; the stope in the back and bottom of the shallow adit level 8 cwts. of ore per fm. The lode we are now taking down by the side of the winze, under the deep adit level, that was left by the old men, is still orey, yielding from 8 to 10 cwts. of ore per fm.

CALLINGTON.—In sinking Kelly Bray engine-shaft below the 32 fm. level, no alteration has taken place since last reported on. In the 20 fm. level east the lode is about 1½ ft. wide, producing good stones of copper ore. In the 50 fm. level east the lode is about 2 ft. wide, with spots of copper ore. The 70 fm. level east is producing 1 ton of copper ore per fm. The 90 fm. level west, on Kelly Bray lode, is producing occasional stones of ore. At the north mine, the shaftmen are still engaged in cutting plat, &c., in the 125 fathom level. In the 112 fathom level north we are laying open tribute ground; the 112 fathom level south is producing 5 cwts. of silver-lead ores per fathom. The 100 fathom level north is producing some good stones of silver-lead ore. In the 90 fm. level south the lode is about 6 in. wide, good saving work. At the south mine we have taken the men from the 125 fm. level north, and put them to rise in the back of this level against a winze sinking below the 112 fm. level; when this is accomplished we shall have better air for the driving of this level than for some time past. In the 125 fm. level south we are opening tribute ground. We have taken the men from the 112 fm. level, both north and south, and put them to sink the above-named winze. In the 90 fm. level south the lode is yielding silver-lead ore. In the 40 fm. level south the lode is small and poor. We sampled this day computed 49 tons of rich silver-lead ores; samples of the same are forwarded to the different smelters as usual.

CARTHEW CONSOLS.—Subsequent to my last general report, the 38 fm. end (upper mine) north has been cleared about 12 fms. north of the slide, when we were of necessity, for want of ventilation, obliged to suspend further operations; in clearing this level it will be remembered we had a very good lode in the back, but in stoping the same we soon found ourselves in the workings of the old men. The same level south we have cleared to the very end, which is about 160 fms. from the engine-shaft, and in so doing we have made some very important discoveries in lead, which are now being worked on tribute, and are much improved since the commencement. A very promising lode is also found in this end, which we have commenced driving to-day. In clearing the 28 fm. level north we have made no important discoveries of late, but have succeeded in the good ventilation of this level, as well as the 38 fm. and 18 fm. levels, by means of winzes, and are now in a position to proceed again at each of these points with but little, if any, chance of hinderances. The 28 fm. level south is now quite cleared to the end, and we have to-day (after communicating it with the 38 fm. level by means of a winze for ventilation) commenced driving it; at commencement it was difficult to define any lode, but before the men had been working the whole of the day, they cut into a very promising lode indeed, about 1½ ft. wide, producing lead, but not in great quantities. From the appearance of this end, and that of the 38 fm. level, I am induced to think, and that strongly, that we are in near approach of very important discoveries, being now enabled to do something in new ground. The engine-shaft is now cleared and secured to the 48 fm. level, as well as cased and divided down to this point, with ground cut for bearers and cistern, plunger pole, &c., which we are now busily engaged in fixing. We have in this level also cleared north upwards of 20 fms., in the back of which a good lode presents itself; and south we have cleared a greater distance, but can say little of the lode, the level being backed up with timber, but, from frequently finding stones of lead in it, I am led to suppose there is some very good ore ground here, but yet obscured from our sight, which we shall seek diligently after as soon as we have cleared to the end. Much greater progress would have been effected here, but for the misfortunes we have met with in breakages in our capstan rope at two different times, and our lift falling to the bottom of the shaft, which, from sounding, appears to be about 15 fms. below the 48 fm. level. At the lower mine, we have succeeded in the completion of a tram-road in the adit level south for about 120 fms. in length, which tends very much to facilitate our progress in this end, and have driven about 18 fms. on the course of the lode, since which, though not rich, it makes a very fine presentation, and to-day is looking much better than for some time past. Our great object here is to intersect the upper mine lode, at which no question rests on my mind but that we shall find it a very important part of our work, as we shall have at the intersection about 40 fms. of backs, and I doubt not will be found very productive of mineral.

CWM ERFIN.—We have just let the following bargains at this mine, and finished paying our last month's cost:—The 20 fathom level, east of the engine-shaft, at 7*l.* per fm.; the stope behind the end, at 3*l.* per fm.; the stope east of the engine-shaft, at 2*l.* 15s. per fm.; to sink the 20 fm. level west of whim-shaft under the 10, at 8*l.* 10s. per fathom; the 20 fm. level east of whim-shaft, at 5*l.* 10s. per fathom.; to rise about 20 fms. west of whim-shaft, at 7*l.* per fm.; to sink 25 fms. east of whim-shaft under the 10, at 9*l.* 9s. per fm.; to stope 20 fms. east of ditto, at 50s. per fm. The 20 fm. level, east of engine-shaft, is worth 12*l.* per fm.; the stope behind ditto 10*l.* per fm.; the stope east of engine-shaft 7*l.* per fm.; the sink 20 fms. west of whim-shaft, for the length (12 ft.), is worth 10*l.* per fm.; the 20 fm. level, east of whim-shaft, is poor; the rise in the 20 fm. level, west of whim-shaft, is worth 10*l.* per fm.; the sink 20 fms. east of whim-shaft, for the length (12 ft.), is worth 18*l.* per fm.: the stope over the 10 fm. level is worth 6*l.* per fm. We estimate to break a little over 20 tons in these bargains for the present month.

DEVON AND COURTENAY.—The lode in the end driving west in the 40 fm. level, is 2½ ft. wide composed principally of white iron, interspersed with stones and small branches of ore in the lode. In the end driving west from the rise in the back of this level the lode is 2 ft. wide, containing fine goggan, among which is found some beautiful stones of grey, black, and malleable ore; both of these places are at present suspended, and the men taken for the purpose of sinking a winze in the bottom of this level, about 8 fms. behind the present end. In the back of the 50 fm. level, on the south lode, the ground in the east and west of the late rise is now set on tribute in two pitches; also another pitch is set on the same lode, east of the cross course. There are also two men employed in driving north in the same level, to intersect the gossan lode, east of the great cross-course.

EAST CROWNDALE.—The middle shaft being now made good to the 17 fm. level, and the stuff almost clear, we shall at once put in penthouse and begin to sink. I have suspended the stopes in back of the 17, and put the men to search the bottom, and about 20 fms. east of the above shaft we have a good stone of tin going down—12 heads of stamps this week by day only has produced 2 tons of tin. This is effected by a good separation of the raw material, and throwing off full one-half of the bulk that was formerly stamped; by so doing we save more tin, and also an enormous expense. I hope to get 8 tons of tin for July and August, which will, I think, more than cover the expense for the two months; I take my July cost not to exceed 90*l.*, and August 200*l.* I intend beginning to burn the tin the last week in this month, and shall be ready to sample by middle of September.

ESGAIR LLEE.—The south lode, in the stopes in the bottom of the deep adit, east of the engine-shaft, is much the same as last reported. The north lode on the deep adit east is about the same as last reported, producing, on an average, from 10 to 15 cwts. of ore per fm., but in consequence of the end being so very wet, the men are making but slow progress. The lode in the winze below the shallow adit never looked so well from the first commencement as at the present time; we are carrying the winze 4 ft. wide in the south part of the lode, which is yielding very good work for that size, but as yet we have not seen the north wall; the winze is now as dry as possible; we shall have the quantity of ore dressed by the end of this month, I promised you.

HAWKMOOR.—The engine-shaft has been cut down, cased and divided to the 20 fm. level, and is commenced sinking diagonally, which will prove the lode as we progress; the shaft is at present 2 fms. 2 ft. under the 20 fm. level, and I am happy to say the lode holds out the same promising appearance as anticipated in my last report, being 3 ft. wide, with a leader of ore 16 in. wide, yielding 4 tons of ore per fm. The lode in the 20 fm. level east, now about 13 fms. from the shaft, is 2½ ft. wide, producing 3 tons of ore per fm.; from the nearness of this end to the western cross-course (about 7 fms.), I confidently expect it will be found to improve as we approach it; the 20 fm. level west has been driven about 11 fms., throughout which distance the lode has generally been productive; in the present end it is 2 ft. wide, and will yield 1½ tons of ore per fm.; the very kindly appearance of the lode in this end, aand the fact of the deposit of ore in the bottom of the 10 fm. level not yet having been reached, induces me to believe that it will not be extended much further before the lode is more productive. There is a pitch working in the back of the 16 fm. level, by four men, which will give the men good wages, and yield a fair profit to the adventurers. We have sampled and sold since last meeting 83 tons 2 cwts. 3 qrs. of copper ores, which has realised 421*l.* 9s. 6d., and have now about 25 tons of good ore in course of dressing.

HEIGNSTON DOWN.—The sinking of Bailey's engine-shaft progresses satisfactorily. The lode in the 35 fm. level, east of cross-cut, is without important alteration since my last. The lode in Hitchins's shaft is about 16 in. wide, of kindly description, with occasional stones of copper ore.

HERODSFOOT.—I beg to hand you a statement of the setting for the current month, the value of the lode in each bargain, where it is to be carried, where no value is stated, the drivings, &c. We are by the side of the lode. In the 106 fm. level south, to drive by four men, at 60s. per fm.; to stope the back, by four men, at 20s., yielding 4 cwts. per fm.; ditto bottom, by four men, at 55s., yielding 15 cwts. per fm.; in the 106 fm. level north, to stope the back, by four men, at 40s., yielding 5 cwts. per fm.; ditto, by four men, at 55s., yielding 6 cwts. per fm.; ditto, by four men, at 40s., yielding 12 cwts. per fm.; ditto, by four men, at 40s., yielding 5 cwts. per fm.; to rise a 50s.; to stope the back, by four men, at 32s., yielding 4 cwts. per fm.; ditto, by four men, at 45s., yielding 7 cwts. per fm.; ditto, by four men, at 55s., yielding 9 cwts. per fm.; in the 94 fm. level north, to stope the back, by four men, at 30s., yielding 6 cwts. per fm.; ditto, by four men, at 42s., yielding 6 cwts. per fm.; to sink a winze, by four men, at 60s., side of the lode; to drive the end, by six men, at 80s., yielding stones of ore. In the 82 fm. level south, to sink a winze, by six men, at 80s., side of the lode; to stope the back, by four men, at 55s., yielding 5 cwts. per fm.; ditto, by four men, at winze, by six men, at 80s. In the 94 fm. level south, to rise a winze, by four men, at 60s., yielding 7 cwts. per fm.; ditto bottom, by four men, at 60s., yielding 12 cwts. per fm.; in the 82 fm. level north, to stope the bottom, by four men, at 45s., yielding 10 cwts. per fm.; ditto, by four men, at 30s., yielding 10 cwts. per fm.; ditto back, by four men, at 35s., yielding 9 cwts. per fm.; to sink a winze, by two men, at 60s., side of the lode; to drive the end, by four men, at 60s., yielding stones of ore.—Tribute: The pitch in the back of the 94 fm. level, by four men, at 5*l.* per ton; ditto, by two men, at 6*l.* The pitch in the bottom of the 72 fm. level, by four men, at 5*l.* 10s.

HOLMBUSH.—The lode in the 120 fm. level south is 4 ft. wide, producing 3 cwts. of lead per fm.; the ground is more favourable for driving than it has been. The ground in the 120 fm. level cross-cut south, towards the flap-jack lode, is favourable for driving. The lode in the 110 fm. level south is 3½ feet wide, producing 10 cwts. of lead per fm.; the lode in the stopes in the back of this level will produce 5 cwts. of lead per fathom. The lode in the 100 fm. level south is 2 feet wide, composed of soft spar, prian, and stones of lead; opening tribute ground; the flap-jack lode in the 100 fathom level, east of the great cross-course, is 20 inches wide, composed of spar, mundic, and stones of copper ore. One parcel of silver-lead ores was shipped last Saturday on board the *Jane*, 26 tons 15 cwts., dry weight.

KIRKCUDBRIGHTSHIRE.—The lode in the 62 fm. level, east of Stewart's, is 8 ft. wide, composed of soft spar and killas, with fine lumps of ore scattered through it; the lode in the same level west is 6 ft. wide, of the same character. The lode in the 50 end east is 2 ft. wide, spotted with ore. The lode in the winze over this end is of a similar description. The lode in Keith's shaft is about 2 ft. wide, composed of killas and spots of ore. The lode in the 30 end west is 1 ft. wide, a good branch of ore in the end (about 2 ft. high), yielding 5 cwts. of ore per fm. The lode in the 40 end west is 3½ ft. wide, with a strong branch of Jack and ore on the south wall.

LEWIS.—The lode in the engine-shaft sinking below the 70 fm. level is 2 ft. wide, saving work for tin. In the 70, east of engine-shaft, the lode is 18 in. wide, unproductive; the 70, east of engine-shaft, on south branch, is worth 5*l.* per fm.; the 70, east of ladder road winze, on south branch, is worth 14*l.* per fm. The 60, east of engine-shaft, on south branch, is worth 16*l.* per fm.; the lode in the 60 east, on Cock's branch, is 1 ft. wide, saving work; the lode in the winze sinking below the 60, Cock's branch, is worth 28*l.* per fm.; we are extending this level (60) south from sump-whim shaft, to intersect other lodes. The 50, east of copper ore shaft, on Cock's branch, is worth 5*l.* 10s. per fm.; the lode in the winze sinking below the 50, on Cock's branch, is 10 in. wide, saving work; the south lode in the 50, east from Oak shaft, is at present disordered by a hard floor of ground. The lode in the 40, east on Cook's branch, is 1 ft. wide, worth 4*l.* per fm.; the 40 west, on Cock's branch, is opening tribute ground; the lode in the 40 east, on south branch, is 9 in. wide, producing some good stones of tin. The tribute ground is looking well.

LOSTWITHIEL.—The lode improves since last week in size and kindliness, and gives promise of increasing a-head; but it is very full of water, and we are paying 5*l.* per fm. driving. I shall get a definite opinion on it from another mining agent in the course of the week, and forward you.

MENDIP HILLS.—The beds of slag stuff which we are laying open at Blackmoor continue to present very favourable appearances, indeed, with very little rubbish on the top, which will enable us to remove the stuff to the dressing floors at a comparative low figure. The engine is now completed; on Saturday we set to work, and am glad to say she started remarkably well; the dressing department is in a forward state, and the carpenters will now turn their attention to the fixing of the incline plane, and also the drums for drawing the waggons, which will be done with as little delay as possible. Charter-house Valley calls for no particular comment, being about the same as for some time past, yielding good slags; we have a tolerable pile prepared for the furnaces, which I intend to begin smelting to-morrow morning.

NANT-Y-CRIA.—The south lode in the shallow adit west is looking very kindly, and is producing more blende than when last reported.

SOUTH WALES MINES.—The north lode, in the Bodcoll deep adit east, does not improve, and from its general appearance, I think it my duty to advise you to suspend the driving of this level any further for the present, and to put the men to drive a few fathoms west on the same lode, where the lode has not been seen for the last 20 fathoms: this will prove whether the ore is in the shallow level dip west, or not. The lode in the Dalwin deep adit, east of the Rhydnant river, is getting rather stronger for driving, and is producing some good stones of ore.

SOUTH WHEAL JOSIAH.—In my report of last week on this mine, I stated that the appearance was such as to induce me to believe we were near a course of ore, and I am now most happy to inform you that my expectations are realised. We have cut into a fine course of black and yellow ore, with a quantity of blue carbonate of copper. In the adit end driving west, on Wheal Jack Thomas lode, the lode is from 3 to 4 ft. wide, and the rich part is about 1½ ft. wide, producing 3 tons of rich ore fm., and is about 15 fms. from surface. There can be no doubt but this will make a rich and lasting mine, as the sett occupies several large and valuable lodes in a most favourable situation, being joining the Devon Great Consols—the richest mine in the two counties of Cornwall and Devon, with the lodes running from that mine direct into South Wheal Josiah—the lode on which we have this rich discovery being one of the Maria lode, and possesses all the qualities and appearances of the ore from this mine; and if this course of ore continues, South Wheal Josiah will be a large dividend-paying mine.

SOUTH WHEAL TRELAWNY.—The engine-shaft is in course of sinking below the 40 fm. level with nine men—ground much the same as last reported. We have also intersected some branches in sinking the shaft that we cut through in driving the 30 cross-cut, 9 fms. west, and it appears they will form a junction with the sparry branch, the eastern side of the shaft; these branches are also letting down the water from the cross-cut—everything is in a regular way of working.

TAMAR SILVER-LEAD.—In the engine-shaft there has been no lode taken down since last reported on. In the 190 end the lode is 3 ft. wide, 1 ft. of which is good stamp work. In the 175 end the lode is 4 ft. wide, interspersed with ore, but not rich. In the 160 end the lode is 1 ft. wide, good work. In the 145 end the lode is 3 ft. wide, producing work of a moderate quality. In the 135 end the lode is 2½ ft. wide, and opening ground of a profitable character. At North Tamar, in the 80 fm. level driving north, the lode is small and poor. In the 70 fm. level north the lode is 18 in. wide, composed of can and ore, saving work. In the same level south the lode is of just the same size and quality. Both of these ends are passing through ground that will set on tribute. We sampled, on the 4th inst., computed 92 tons of rich silver-lead ore.

TINCROFT.—Palmer's shaft, on East Pool lode, is sinking below the 90 fm. level; the lode is 2 ft. wide, with good stones of copper ore. The lode in the 90 east is 2 ft. wide—kindly, with some ore. In the 80 fm. level west the lode is 4 ft. wide, worth 9*l.* per fm. for copper. In the 70 fm. level west we are driving north, to cut the main part of the lode. The 36 fm. level is driving west towards Stainsby's shaft; the lode is 2 ft. wide, worth 6*l.* per fm. for cooper. In the 24 fm. level west the lode is 1 ft. wide, with spots of ore; the stopes in the back of this level are worth 35*l.* per fm. for copper. At North Tincroft, the engine-shaft is sinking below the 100 fm. level; the lode is 3½ ft. wide, worth 20*l.* per fm. for copper. In the 100 fathom level east the lode is 4 ft. wide, worth 12*l.* per fm. for copper; in the 100 fm. level west the lode is 3 ft. wide, worth 10*l.* per fm. for copper. In the 90 fm. level east the lode is 3 ft. wide, worth 12*l.* per fm. for copper; the 90 west is worth 10*l.* per fm. for copper. In the 80 fm. level, east of Willoughby's shaft, the lode is 4 ft. wide, worth 9*l.* per fm. for tin. On Highburrow lode, in the 152 fm. level, east of engine-shaft, the lode is worth 11*l.* per fm. for tin. In the 142 fm. level, east of Martin's east shaft, the lode is 4 ft. wide, worth 14*l.* per fm. for tin; the stopes in the back of this level, east of the shaft, are worth 17*l.* per fm. for tin; the stopes west, in the 142 fm. level, are worth also 17*l.* per fm. for tin. In the 132 fathom level, east of Martin's east shaft, the lode is worth 16*l.* per fm. for tin; the lode in the west end, in the same level, is worth 10*l.* per fm. for tin; the stopes in the back of this level, east of engine-shaft, are worth 17*l.* per fm. for tin; the stopes in the back of this level west are also worth 17*l.* per fm. for tin. In the 120 fm. level, west of engine-shaft, the lode is worth 10*l.* per fm. for tin. In the 110 fm. level, driving east of Cook's Kitchen, the lode is 3 ft. wide, worth 6*l.* per fm. for tin. On Chapple's lode, in the 100 fm. level, east of Downright shaft, the lode is 1½ ft. wide, with spots of ore; in the west end, in the same level, the lode is worth 16*l.* per fm. for copper. The 90 west is worth 25*l.* per fm. for tin and copper. In the 80 fm. level west the lode is 3 ft. wide, worth 9*l.* per fm. for tin and copper. At Wheal Providence, the lode in the engine-shaft, sinking below the 33 fm. level, is 3 ft. wide, with some ore, but not to value.

TRELEIGH CONSOLS.—Garden's shaft, below the 113 fm. level, is sinking in the country. In the 90, west of ditto, the lode is 15 in wide, with stones of ore. In the 80, west of ditto, the lode is 1 ft. wide, worth 4*l.* per fm.; in the 80, east of cross-cut, the lode is 18 in. wide, worth 2*l.* per fm.; in the winze below the 80 the lode is 1 ft. wide, with stones of ore. In the 60, west of Garden's, the lode is 2 ft. wide, with good stones of ore, and is looking very promising. At Wheal Parent, the engine-shaft, below the 30 fm. level, is sinking in the country; in the 30, east of ditto, the lode is 2½ ft. wide, worth 2*l.* 5s. per fm.; in the 30, west of ditto, the lode is 18 in. wide, worth 3*l.* per fm. In the 20, west of ditto, the lode is 15 in. wide, but little ore. In the whim-shaft, below the 12 fm. level, the lode is 18 in. wide, with stones of ore. Nicholson's shaft will require two or three days more to complete the work named in the last report.

WHEAL BASSET.—Since our last meeting, we have holed Dennis's shaft, which is an important object, and after it is completed to the 30 fm. level, we shall be in a position to increase the returns in the fair development of the mine; it may be necessary to observe, that the width of the rise against Dennis's shaft was only the size of the lode; we are now cutting it down. In referring to our tutwork, upon Williams's lode, it is so late since a general description was given, that we presume it will be uninteresting to go over the same course again, and will thank you to accept, as our opinion, that on the whole, at no time, has the mine presented a better appearance. Subsequent to our last meeting West Buller adventurers have intersected a lode 12 fms. off our boundary (which was many years since seen in this mine), and its appearance in the former mine is more flattering in the adit than in Wheal Basset; still we consider it an important auxiliary, and shall prosecute it at deeper levels, and have commenced a 20 fathom level cross-cut, and calculate 7 or 8 fms. will intersect it; the ground is soft granite. Thieker's shaft is sunk to the 110 fm. level, where we have commenced to drive, and consider it necessary to get west of the cross-course before we meet with much ore. The 100 and other levels continue without much variation. Carnkie engine-shaft is sunk to the 75 fathom level, and we are now about to drive east and west; the lode is composed of gossan and quartz, not much tin at present. The other levels are producing a fair quantity of tin as they have done for some months past. At North Basset lode a shaft has been sunk 15 fms. below the adit, and we shall continue it, provided we are not impeded by water; we are also extending the adit east on this lode, which has been of a promising character.—[We gave an abstract of the accounts in our last Journal.]

WHEAL PENHALE.—Since my last general report, we have driven the 20 fm. level end north about 16 fms., and have got into that bunch of ore which proved to be so important in the adit level, and which has been found much more important in the 10 fm. level, and, I doubt not, will be found far more valuable in the present end, where the lode is at this time 4½ ft. wide, mineralised throughout, and carrying with it a leader of lead, about 8 in. wide. We have driven the south end, in this level, nearly the same distance, and find the lode large in it, and quite as productive in mineral as the former. We have also extended the 10 fm. end north several fathoms, and find, to our great satisfaction, that the bunch of ore above alluded to has continued for about 24 fms. in length, and, for the most part, of good quality; the south end, in this level, has likewise been continued for a number of fathoms, but has not been found of equally productive with the latter; yet we have good tribute pitches in it. We are also sinking our engine-shaft below the 20 fm. level, wherein the lode is found to be very large, about 6 ft. wide, and is likewise rather harder than could be desired, but it is yielding very good work in lead and copper, and the shaft is now sunk between 3 and 4 fms. A winze is also being sunk for ventilation, and for proving the ground north between the 10 and 20 fm. levels; this winze is now down about 2 fms. below the 10 fm. level, in which the lode is about 2 ft. wide, producing good work in lead and copper; for like purposes a winze is being sunk south in the 10 fm. level, and is down below this level about 3 fms., in which the lode is somewhat disordered, consequent on an elvan course coming in connexion with it. The new tribute pitch, noticed in my former reports as being set in the back of the 10 fm. level north, continues, up to this time, very good, principally for copper. I have set since, in the back of this level, north of the former pitch, two others, which look very well indeed. There are also four other tribute pitches now being worked, all of which show very well. I would with much pleasure add, that of late our prospects have become very much brightened, and are daily becoming more so, of which I hope to have to report a continuance; and, I would further add, our brightened prospects are not confined to the underground department alone, but our dressing department gives us its share, from the very splendid and efficient crushers which we have fixed, and in first-rate train of working, which effects a saving of not one farthing less than 20*l.* per month. This machine has been carefully examined by many competent persons, who have universally pronounced her not to be equalled in the county.

WHEAL TRELAWNY.—The lode in the 82 cross-cut is intersected about 5 ft., 20 in. of which produce some good lead and can, but we are not yet through it; however, from its character and size, we expect to have a good lode here. The lode in the 72, north of this shaft, is 3 ft. wide, and worth 10*l.* per fm.; in this level south the lode is 2 ft. wide, and worth 11*l.* per fm.; the stopes in the back of this level continue to produce favourably. The lode in the 62 north is 5 ft. wide, and worth 14*l.* per fm.; the stopes in the back of this level continue to produce favourably; the lode in the winze sinking under this level south is 3 ft. wide, and worth 9*l.* per fathom. At Trelawny's shaft, the 72 fm. level cross-cut is extended 9 fms. west, and have this day cut the wall of the lode. The lode in the 52, north of Trelawny's shaft, is 3 ft. wide, and worth 11*l.* per fm.; the stopes in the back of this level continue to be fairly productive. The stopes in the back of the 42 are as were last reported. The winze under the 52 north is suspended, in consequence of an increase of water. At the north mine, the lode in the 55, north of Trehane, is 3 ft. wide, and worth 12*l.* per fm. The lode in the 45, north of Trehane, is 2½ ft. wide, and worth 5*l.* per fm. Smith's shaft is sunk 10 fms.; the lode in the bottom of this shaft is 2½ ft. wide, and worth 10*l.* per fm. The lode in the 40, south of this shaft, is 2½ ft. wide, and worth 5*l.* per fm.; in the same level north the lode is 2 ft. wide, and worth 4*l.* per fm.; the stopes in the back of this, and the 30 fm. level, are usually productive.

WEST WHEAL JEWEL.—In the 57 fm. level, west of Williams's cross-course, on Wheal Jewel lode, lode not taken down in the past week. In the 47 fathom level, east of ditto, on the same lode, lode worth 3*l.* per fathom. In the deep adit west of Williams's cross-course, on the same lode, lode unproductive. In the deep adit west of Tregoning's shaft, on Tolcarne tin lode, lode producing stones of tin. In the stopes in the back of the 12 fm. level, west of Pryor's winze, on the some lode, lode worth 9*l.* per fm.; in the stopes east of this winze, in the back of the same level, lode worth 12*l.* per fm.; in the stopes in the bottom of the 12 fm. level, east of Tregoning's shaft, lode worth 15*l.* per fm.; in the stopes, in the bottom of this level, east of Trogining's winze, lode worth 18*l.* per fm.; these stopes are working on tribute. Rose in the back of the 70 fm. level, west of Williams's cross-course, on Wheal Jewel lode, last month, 4 ft. 6 in.

WHEAL VINCENT.—In stoping east of the shaft on the south lode, we are still breaking good work for tin, and the lode is much larger than last reported on; it is now about 3 ft. wide, especially near the shaft; the stopes in the west of the shaft, in this lode, is also improved in size, and is producing some excellent work for tin; it is also 3 ft. wide; coming near the shaft the north lode is still producing moderate stamps work. We have opened the south lode further west, and are just at the lode, which I shall be better able to report on next week, as we have not yet sufficiently cut through it; but are breaking good stones of tin. Our new stamps are up, and shall lose no time in getting the floors, &c., in course for washing.

WHEAL ZION.—I discovered a silver-lead lode 30 fms. west of the deep adit cross-cut last week, of great promise, which was disregarded by miners 30 or 40 years ago, when this adit was being driven on the course of a copper lode, the lead being too much like fine-grained steel in form to attract their attention. We are, however, exploring the lode southward, and find it worth, by assays, about 20*l.* per fm. As soon as convenient we intend driving north also on this lode, by which, at the distance of a few fathoms, we shall intersect a copper lode 45 fms. deep, the gossan of which, 12 fms. below the surface, is 3 ft. wide, and of the right sort, yielding good stones of coated yellow copper ore, from which circumstance, in connection with another more beneficial one—viz.: a great copper lode, with rich gossan on the back, will be found in conjunction with the aforesaid lode, near the union of the first two named; we may, therefore, reasonably calculate on meeting with a large deposit of ore between the adits. The ground in the shallow adit cost 20s. per fm., and in the deep adit 40s. per fm.; on the course of the lead lode northward will be a good price in sight. I found in the glebe land a lode producing ore at grass, which yielded 12½ per cent. of copper, and which I hope shortly to develope to the satisfaction of all concerned.

FOREIGN MINES.

IMPERIAL BRAZILIAN MINES.—*Bananal, June* 4.—Gongo, I regret to say, presents nothing new.

At Bananal no alteration has taken place in our cross-cut, west of Wray's shaft, in the adit level, and there is but little change in that at the same depth east of Goldsmid's. The 7 fm. level is continued northward from Walker's cross-cut, and the 14 fm. level southward advances towards Thomas's shaft; the vein in both places is small, and entirely without gold. The stopes in the back of the 7 fm. level, north of Thomas's shaft, are very poor. We continue to sink Thomas's shaft, but the vein is small and irregular; we rarely even see specks of gold in it, and it yields but slightly at the stamps. As we are here 5 fms. deeper than we are at Walker's, the water is increasing very fast. We continue to sink on the Big Pump vein, and now and then get a hat-cap of work for the washing-house, but the vein is very small. We ought, if possible, to extend our 14, to intersect this formation; but our whim is so much occupied by the sinking of the shaft, and other works there, that it would be difficult to remove the stone we might break in driving. The part which the old people called the Magalhaes Pit has been cleared out, and we are sinking on the vein in it; the present bottom is about 2 fms. above our adit; the vein is from 4 to 6 inches wide; and, on the morning of the 2d inst., we obtained rather more than two boxes of work from it, which yielded about 4½ lbs. of gold at the washing-house, which we have included in May account. We intend intersecting this shoot at the 6 fm. level, and hope it may yield well.

P.S.—Since the foregoing was written, we have obtained from the before-mentioned Magalhaes vein rather more than one box of work for the washing-house, which will probably yield at least 1 lb. of gold. *Gold Report.*

From Gongo, from May 24 to June 2	.....	*Lbs.* 3 10 12 0
Bananal ditto	.....	..6 5 18 0—10 4 10 0
Total from 1st Jan —Gongo	.....	*Lbs.* 76 6 13 0
Ditto Bananal	.....	90 1 3 0—166 7 16 0

GUADALCANAL SILVER MINES.—Extract of captain's letter, August 3.—"In sinking the winze in the 31 fm. level, (Pozo Rico) the lode is much the same as in driving the end, producing some good work, the productive part of the lode being about 2 ft. wide, ground very favourable for sinking; a short time will intersect the old workings, if any, between this and the 43 fm. level; should there be none here, and we find it to be all whole ground, we may calculate on raising some amount of mineral from this level. Considering the smallness of our lift to unwater a large extent of levels and workings in a short time, I think we are getting on very fair; we are enabled this morning to get down and see the back of the 62 fm. level; another 24 hours, and I hope we shall be able to examine it, and see what repairs are requisite, preparatory to putting down the next lift. To get on with all speed, I have set the sump-men to unwater the 70 fm. level, and put in footways, to make the thing complete against the end of August. All the other places are without a change, they are progressing as fast as possible. I have put them all on contract work, by which I find double the amount of work is done, by their having a chance of getting a trifle more money. The ground plan and sections are sent you, which I hope will reach in due course."

BOLANOS MINING COMPANY.

SIR,—I beg to hand you a brief history of the above company, which may be interesting to many of your readers, considering that the question of increasing the capital for a specific purpose, or of winding-up the concern, is shortly to be determined. About the year 1750, certain mines in Mexico, situated at Bolanos, were worked to great advantage by the Spaniards, who were then in possession of the country, until they obtained such a depth that the weight of water became too much for their rude means of raising it; they were, consequently, compelled to bring their operations to an end.

In 1826, English capitalists, confident in, as they thought, the superiority of their machinery, began to turn their attention to speculations of this sort, and, among other adventures, one was started for the purpose of working the mines of Bolanos: hence the title of this company. Capital was soon raised by issuing 1000 shares, at 300*l.* each, but which were afterwards divided into 2000 shares of 150*l.*; there soon became a mania for foreign mining, the extent of which may be judged by the fact of the shares in this and another company being at one time at a premium of 1600*l.* It was estimated that about three years would be required to bring the mines into a state of profit; that time wore away, and with it a great portion of the capital of the company.

About this time (1830) another adventure was entered into by the same company, near Zacatecas (Veta Grande); this proved eminently successful, the profits derived from this source amounting to upwards of 600,000*l.* sterling. This success induced the directors of the day to persevere with Bolanos, in the vain hope of ultimately reimbursing themselves for their enormous outlay. In 1838, the Veta Grande Mines became poor, and were given up. The company, thus deprived of its *fountain of silver*, was reduced to the necessity of raising more capital, in order to complete their *works of discovery* in Bolanos; about 90,000*l.* was obtained from the shareholders, in 1838 and 1840; soon after, a "discovery" was made, but not the one which the company were in search of—it was, that upwards of $5,000,000 had been sunk in the Bolanos Mines, and that, after deducting the amount of profits derived from Veta Grande, the concern was in debt about 100,000*l.* The mines were, of course, surrendered to the owners.

The company was thus on the *brink of ruination*, when another brave attempt was made to raise 50,000*l.*; it was a sort of forlorn hope; the shares were now selling for a few shillings, one of which had formerly been considered a little fortune. However, 18,000*l.* was scraped together between a few of the original subscribers, I may say the founders of the company (among others that honourable man, Sir T. F. Buxton), who felt themselves bound to make what may be fairly termed a personal sacrifice (there being no reasonable hope of ever receiving a fraction of it back again), in order to make another attempt to recover some portion of the money, proved by experience to have been positively thrown away. At this juncture (1842) most unexpected and welcome intelligence arrived—the two small mines of San Nicolas and San Clemente had suddenly become most profitable; these, in turn, became exhausted, and were delivered to their owners, after having paid off all the liabilities, and provided a small capital for working the remaining mines of the company—viz., San Rafael, Loreto, and Celestina; of these the first and second named proved failures, and were given up (1848). Celestine, which produces a very small profit, is still retained. The directors having now an abundance of plant (steam-engines, malacates, and other machinery) unemployed, which had been recovered from

Bolanos, and which in Mexico is perfectly valueless, and, therefore, unsaleable, unless on a productive mine, were induced in 1846 to try a virgin mine (ground that had not been worked upon before), called El Bote; but then, in addition to the steam engines, &c., &c., which the company had unemployed, it was necessary to provide stores of quicksilver, salt, maize, wood, and a hundred other articles, which, so far inland, can be purchased advantageously only at certain periods. To do this would require at least 20,000*l.*, besides the cost of sinking shafts, building engine-house, mills, store-houses, &c.—in fact, an outlay of 100,000*l.* would have been but reasonable, before returns could be expected on a mine of such extent.

To do this, the directors had at their disposal 5000*l.* only, besides the machinery. It was a most ridiculous undertaking, but Dame Fortune again came to their assistance. Immediately on breaking ground the mine became profitable, and at the end of 1847 there was a clear profit of about 20,000*l.*, although the lode had been worked upon but at one point, and to the cost of which had been charged the expense of sinking a new shaft at a distant part of the mine, and all the surface erections. They had now (1848) arrived at a depth at which all veins in the district (Zacatecas) have a floor of poor ore about 15 fms. thick; consequently the quantity of silver diminished, whilst the expenses remained the same; and at the end of the year, when the floor is nearly cut through, the new shaft down, and cross-cuts close upon the lode, engine-house completed, and engine at work, crushing-mills and storehouses finished, which have cost over $250,000 (50,000*l.*), all of which, for want of a capital account, have been charged to the working costs of that part of the mine from which ores have been extracted—in fact, when the mine is brought to a point which, if persevered with, can hardly fail to be most profitable—the directors have their attention called (if I rightly understand the position) to their contract with the owners, by which the company are bound to find a sufficient working capital, in consideration of a moiety of the profits to be derived. The profits derived in the first year were nearly absorbed during the second; the mine is insufficiently stocked with stores, which are not paid for, and, consequently, purchased at an advanced price. Capital ought properly to have been found in the first instance, the shafts sunk, and the mine drained, before any ores were extracted; this would have lessened the cost of extraction some 30 per cent. The owners, therefore, very justly say—through your not keeping to your engagement, we are losers, both in respect to the cost of raising the ores, and likewise in the purchase of stores; you must find capital, and work the mine properly, or give it up.

To surrender a concern that has, with a capital of 5000*l.*, produced a profit of upwards of 50,000*l.* in little more than two years, would be the height of absurdity. The directors have properly determined to use every exertion to raise the required capital to commence, as it were, a new adventure, or rather to work a mine having, if we judge from its results, little of the adventurous about it. They offer the old shareholders, and next to them the public at large, a bonus of a share in consideration of the loan of 3*l.*, backed by a priority of claim on the assets of the company. Some will say this is too good an offer to be worth much. Others, why do not the shareholders subscribe if it is so good a thing? These arguments are very natural; and I am ready to admit I should think the same, were I not acquainted with the circumstances of the case. It appears that there are not 200 names (shareholders) on the books of the company—one-half of whom have long since gone the way of all flesh, and few of those remaining are in a position to respond to the appeal of the directors; besides, they have to stem the torrent of prejudice that has set in against such undertakings since the failure of the Real del Monte Company.

August 16. T.

ST. JOHN DEL REY MINING COMPANY.

SIR,—Your last Number contained a letter from the secretary of the above company, which demands a reply. He begins by stating that an epidemic has prevailed for two months past at the company's mines, in consequence of an unusually cold and wet season, but that the whole mortality for four months had not exceeded 40 out of a population of 1106. The seasons are very distinctly marked at Morro Velho. From October to April continued rains and very high temperature. The other months are dry, cool at night, and cold towards morning. During the rains, diarrhœa and dysentery prevail. In the winter months, May, June, and July, the cold is greatest, and pulmonary complaints are rife. It is true these are epidemics, but they are of yearly recurrence, the mortality caused by them depending in great measure upon the persons subjected to the influence of the climate and the work they are called upon to perform.

Forty deaths in four months, or 120 in the year, in 1106, shows a mortality of nearly 11 per cent. per annum; and as the secretary gives the average mortality of 1847 and 1848—viz., 4 1-20 per cent.—as favourable, when compared with that of England, I will, in a few words, prove that there is too a wide a difference between the populations to admit of any comparisan. At Morro Velho there are no old blacks belonging to the company, or leased from Cata Branca; all those hired from other quarters (more than half the working force) are in the young prime of life—no children nor old people amongst them to be carried off by the diseases of childhood, or to die under the burden of years. Select similar cases in England, the mortality would not be one per cent.

The years 1847 and 1848 show, on the average, a small mortality. There were very few new blacks sent into the mine in 1847 and the beginning of 1848; but a few were taken on in the month of July, or thereabouts, when the new stamps went to work. Blacks were taken from whoever liked to send them for six years certain; in the dyssentry season, the deaths increased, and, with the first appearance of cold weather, the mortality is horrifying. After the cold season of the latter year the force was greatly increased (the average number of hired blacks in first three months of 1848 was 128, similar period of 1849, 412). The next point touched upon by the secretary, is the accusation brought against the company—"that to obtain a large produce, their slaves are made to work overtime;" and he goes on to say, that the hours of work of the blacks are eight out of the 24; that overtime is given as an indulgence and received as a boon, and they are paid for it as Englishmen are. He then gives some rules for this grant of overtime, the first of which is most unjust, as it makes physical force the only criterion for indulgence and reward.

The first assertion, that the blacks work only eight hours is not exactly correct; those employed in kibble-filling, stope-clearing, firing, timbering, landing, and boyer carrying, work 12 hours, less meal times, and the borers, whose work is the hardest, have a task set them, which they must complete. If strong, good borers, and the ground be favourable, they may get through the task in much less than 8 hours; if weak, unskilful, or unlucky in their holes, they may be kept underground 10 or 12. A mere list of names for overtime handed to a superintendent, who does not know 1 in 10 of the blacks, will not prevent their being overworked, from the simple fact that a freshly arrived negro, to whom the mine is a new world, the boyer and mallet new tools, is overtasked when called upon, not to work overtime, but to perform the same labour as his more instructed fellows. The statement that the black is paid for his overwork as the Englishman, admits of two interpretations—they receive about one-tenth of the Englishman's pay for the same labour.

I do not agree with your correspondent, that the air of the mine at Morro Velho is a cause of the great mortality; if it were so the English would suffer—not, perhaps, to the same extent as the blacks, whose work is much more laborious. I believe the immense mortality to arise from the great variation of temperature, especially in the cold season; and that until newly-hired blacks have passed through one ordeal of the seasons, and become in some measure acclimatised, they should not be allowed to work in the mine by night; that their task at first should be light, increasing gradually as they become accustomed to the work. Were this plan followed, instead of forcing the men to break the stone required, not considering what they are physically capable of breaking, without injury to health, the hospital at Morro Velho would not be the pest-house it has become.

In the latter part of the secretary's letter, he comments upon the opinion expressed—"that the mere employment of slaves by Englishmen in itself requires condemnation." He says that the directors of his company deny the imputation—their company having been of great service to the black race in their neighbourhood. Of this there is no doubt; the companies have caused an immense improvement to have taken place in the food and clothing of slaves generally in Minas Geraes; and however much opposed we may all be to slavery, it would be well to inquire, whether the emancipation of all the company's blacks would be the blessing to them which sanguine philanthropists suppose? Speaking with some knowledge of the subject, I am convinced that, to 19-20ths of them, it would be utter and speedy destruction. Were it matter of discussion, I could give you many reasons why the condition of the slaves is nominally better than freedom would make it, without bringing in the secretary's flourish—"that the blacks are permitted to buy pigs and poultry (with their own money), and that the binding and active obligation of the company is to provide for all their slaves' wants." The evil appears to be, that the blacks do not long enjoy their sties and fowl-yards, and that, dying before their time, none call upon the company for support in old age and infirmity.—VERAX: *City, August* 18.

TRANSFER OF MINING SHARES.

SIR,—Perhaps you will answer me the following question through your valuable Journal. I happen to hold two shares in a mine adventure, which was supposed to be divided into 256ths; but 136 parts or shares were appropriated only; the remainder are now about to be divided between the present company, each receiving his proportionate part, agreeable to the number of shares in his name previously. I have disposed of 1-256th share to a party. As there still remains 1-120th share as yet unappropriated, can you inform me which of the two is most entitled to that part, 1-120th share. You will please to further understand that, until the shares are divided amongst the present shareholders, the 1-256th part which I have disposed of cannot be registered in the cost-book.—A. F.: *August* 15.

[If the adventure was formed with 256 shares, but only 136 were taken, there can be no question but that the mine, if so carried on with the limited or reduced number, was, in fact, the property, or interest, of those holding the shares as original holders, or to whom they might be transferred, hence any transfer made conveys to the transferee the right of the original holder, and, of course, his responsibilities: as regards the transfer, "A. F." had no right to sell, if he could not ensure it. It is a quibble.]

WHEAL MARY ANN MINING COMPANY.

SIR,—Last week I sent you the abstract of our three months' accounts, passed at our general meeting, held here on the 8th instant, and also the report of the mine, which I consider a necessary appendage, but you have thought proper not to publish it. I shall be glad to know your reason for omitting it, as, in the same Journal, you have added the report to the abstract of Wheal Seton and other mines; and if you will not publish Wheal Mary Ann report, I certainly will not trouble you again with it.—PETER CLYMO, Jun.: *Liskeard, August* 16.

[Our reply is very simple—the accounts and report were received on Saturday morning, the 11th inst., and, so far as time and space allowed, our correspondent's wishes were attended to. It will be the loss and fault of the adventurers, if that the report and accounts do not appear in our columns henceforward, as we are, at all times, desirous of rendering information, at the earliest moment, for the advantage of those interested.]

ALFRED CONSOLS MINING COMPANY.

A general meeting of adventurers in the above mine was held at the offices, George-yard, Lombard-street, on Friday, the 10th inst.

HENRY NOELL, Esq., in the chair.

The following accounts for February, March, April, and May, showing a balance of 1088*l.* 19s. 8d. against the mine were submitted:—To cost for the four months, 930*l.* 19s. 10d.; merchants' bills, 474*l.* 11s. 6d.= 1405*l.* 11s. 4d.—By copper ores sold, 314*l.* 6s. 1d.; sundries, 7*l.* 6s. = 321*l.* 12s. 1d.: leaving balance against the mine, as above stated; whereupon a resolution was passed, that the same be divided amongst the shareholders, according to their respective shares (say 1*l.* 1s. 2d. per share); and a further resolution, authorising Mr. Noell, the purser of the mine, to take proceedings in the Vice-Warden's Court against defaulters in the former division of cost as well as the present, if not paid within 14 days from this date.—Mr. R. Thomas was appointed secretary in the place of Mr. H. Thomas, who had proceeded to Spain.—The following report, from Capt. M. White, was read to the meeting:—

In handing you a report of these mines for the meeting on Friday next, I am glad to refer you to the great improvements taken place since your last meeting, and which my reports from time to time will have explained. Field's engine-shaft is now sunk 8 fms. 3 ft. under the 50 fm. level, and since sinking under this level, the lode has had a better appearance than for the last 20 fms. sinking, and is in the present bottom of the shaft 5 ft. wide, with regular leaders of copper ore running through it, and is very much softer for sinking, the hard capel having nearly left the lode, and is superseded by soft spar with ore, which we think a very favourable indication; by the end of the present month this shaft will have reached the 60 fm. level. The 50 fm. level, west of this shaft, is driven 24 fms., and for the whole distance the lode averages about 5 ft. wide, and is dredged with copper ore. The same level east has been driven 12 fms.; for the first 7 fms. the lode is about 2 ft. wide, after which it has increased to 4 ft., and is composed of more spar than it has been for the whole driving. In the 40 fm. level east, the lode is about 3 ft. wide, principally composed of capel, mundic, and carbonate of iron; in the 40 fm. level west, we have driven south 8 fms. 6 in., and have not found any other part of the lode than that on which the level is driven. In the Great Wheal Alfred Mine the water is under the adit level from 15 to 16 fms., in which mine we are clearing the 10 fm. level west of the boundary shaft, and also clearing and securing the old Botway shaft; we expect by the appearances, there will be a great quantity of copper ore raised from this ground as the water becomes drained, the water continues to sink about 1 ft. 6 in. a week. Our engine is now working six strokes per minute, which with the present pump is about half its power. The average gettings of the tutworth men for the last twelve months is 2*l.* 6s., and the tribute averages 2*l.* 9s. 10d.

KINGSETT AND BEDFORD MINING COMPANY.

A general meeting of shareholders was held at the mine, on Monday, the 6th inst.—WILLIAM TRAER, Esq., in the chair.—The accounts were audited and passed, showing a balance of 72*l.* 12s. 5d. in favour of the adventurers; a call of 5s. per share was made, payable on the 24th inst. The following report from Capt. Spargo was read:—

I was underground here on Saturday, and all I can say is, that the lode south of the rise still continues productive; the stones of lead now before you I broke with my own hands; I consider them to be very encouraging. The lode in the end at present is not as large as we have seen it, but equally kindly, and I have no doubt, in a few fms. driving, it will again get to its regular size. In driving north, on the same lode, we are breaking some good stones of lead; I have never seen the lode so compact, and the walls so well defined as at present. We intend to drive a few fms. farther north, and then commence rising, and, according to the appearance of the lode at present, I consider we shall soon cut a course of lead, as we shall get up in a softer clay slate, just as we had in the rise when the lode began to improve. We are now about under the old men's workings, a little to the north of Luke's shaft, where we are certain there is a good paying lode, and as we rise up many feet before we reach these bottoms, we shall drain down the water, so as to be able to stope it away dry, at the same time communicate to the present end that we are now driving south of the rise; and if the lode turn out according to expectation, and as we have already found it in the rise, and what we have driven through, I can see no reason to doubt of our realising good profits. I am happy to inform you that the lode back south, or, at least, the caunter that we are riding on, is producing some fine work indeed for lead, a more promising lode I never saw—in fact, at this present time, it is worth from 8*l.* to 10*l.* per fm. for lead; I would recommend to put on more hands here; the railroad must, of course, be laid down—it will save great expense. In driving on the copper lode, we have met with a small cross branch, which has somewhat disordered it. According to the bearing of the Betsy lead lode, this caunter has caused a change in its underlay in the southern part of the sett; still no one is certain of this, as we cannot take a correct bearing of the lodes on being cut by a shode pit; however, we shall soon prove this by driving on the copper lode. I am in expectation of cutting a good course of lead at the junction of these two lodes. In taking a regular survey of the mine, since the last meeting, I cannot say but it is of an improving character, and that we may reasonably expect a still greater improvement.

[The meeting was held on the mine, pursuant to notice, the accounts produced, which had been previously audited, and agent's report read, gave full satisfaction. We hear some discoveries have been since made, and instead of a balance of 5*l.* 2s. 7d. being against the company, there is now the sum of 72*l.* 12s. 5d. in favour—77*l.* 15s. arrears of calls having been since received.]

TREGORDEN MINING COMPANY.

A general meeting of shareholders was held at Liskeard, on the 9th instant, when the accounts for April, May, and June, were audited and passed, showing—Balance end of March, 100*l.* 6s.; cost for April, May, and June months, 443*l.* 4s. 7d. = 543*l.* 10s. 7d.—By call May 25, 112*l.*; ore sold, June 21, 5 tons 7 cwts. 2 qrs., at 27*l.* 2s. 6d., 145*l.* 6s. 3d.; ditto, June 31, 5 tons, at 28*l.* 13s. 6d., 143*l.* 7s. 6d.: leaving balance of 142*l.* 16s. 10d. against the adventurers.—A call of 10s. per share was made.—The following report from Capt. W. Bryant was read to the meeting:—

August 9.—Since my last report we have driven the 20 fm. level north 2 fathoms, by which it is now extended 15 fms.; the lode in the end is 1 foot wide, composed of spar, capel, and carbonate of iron, interspersed with silver-lead ores; judging from the nature of the lode, and the ground about it in this end, I anticipate we shall shortly meet with orey ground that we have driven over in the 12 fm. level. The 20 fm. level south is extended 13 fms., where the lode is 2 feet wide, composed of flookan, spar, capel, and carbonate of iron, intersected with silver-lead ores, but not rich. In the 12 fm. level north we have opened on the main part of the lode since the late discovery; it is now worth in the end 4*l.* 10s. per fm., and is improving; cost for driving, 2*l.* 10s. per fathom; the stopes now in the course of working in the back of the 12 fm. level are still yielding lead, and we have now standing 30 fms. of ground north of our present stopes, where the average size of the orey part of the lode is from 12 to 18 in., interspersed with silver-lead ores throughout. A parcel of rich ore will be ready for sale in about 10 days hence.

WELLINGTON MINING COMPANY.

A general meeting of shareholders in the above mines was held at the offices, George-yard, Lombard-street, on Friday, the 10th inst.

Mr. THOMAS FIELD in the chair.

The following accounts for March and April were submitted, showing a balance in favour of the mines of 448*l.* 15s. 3d. were passed, and a dividend of 1*l.* 10s. per share was declared payable on the 17th inst., leaving a balance to the credit of next account of 64*l.* 15s. 3d.: By copper ore sold, 76*l.* 13s. 7d.; tinstuff, 141*l.* 14s. 9d. (deduct dues, 1-18th, 50*l.* 11s. 6d.) = 85*l.* 16s. 10d.; received of Linares Company for materials, 68*l.* 14s. 8d.; balance of last account, 108*l.* 3s. 8d.—making a total of 103*l.* 15. 2d.; from which deduct cost for March and April, 416*l.* 3s. 4d.; merchants' bills, 141*l.* 16s. 7d.=587*l.* 19s. 11d.: leaving a balance of profit, as above, of 44*l.* 15s. 3d.

The following report from Capt. Matthew White was read:—

August 7.—The engine-shaft is sunk 2 fms. 1 ft. under the 32 fm. level; this shaft is not on the course of the lode, and will continue perpendicularly until it reaches the 42 fm. level; the shaftmen are fixing plunger lift in the 32 fm. level; by this being done, the shaft will not be sunk deeper for the next fortnight. The lode in the 32 fm. level, west of the engine-shaft, is from 1 to 2 ft. wide, poor; the lode in the same level, east of the engine-shaft, is 1½ ft. wide, about 1 ft. of which is nearly solid ore of very good quality; this level is passing through the good ore ground that we drove through in the 22 fm. level—this looks well for the next level under. The 22 fm. level is driven east of Parcolley shaft 21 fms.; the lode for the whole distance is from 1 to 2 ft. wide, and for the most part productive. I set two pitches in this ground on Saturday last, one to two men at half a farthing in 1*l.*, and one to two men at 3s. in 1*l.* In the 12 fm. level, east of Parcolly, the lode for the last month's driving has for the most part been poor, but at this time presents a better appearance, being now from 8 to 10 in. wide, and orey. In driving south in the adit level, west of the engine-shaft, we have cut the south lode, and are driving west on it 8 fms.; so far it is poor; this level, in three or four months, will let the water down in the old mine; we hope by this to be able to reach the western part of the sett, where we think there is a chance of doing good for all parties concerned. We have driven the cross-cut north of the engine-shaft in the adit level 75 fms., and at that distance have intersected a lode; at the first, the lode was only 7 in. wide, and for the most part spar; in driving east on it 8 fms., it is from 3 to 4 ft. wide, and the appearances changed for the better, being composed of tin, copper ore, blende, prian, mundic, and spar; this lode we consider will be a great advantage to these mines, as we have ground on its course, east and west, three-quarters of a mile in length. The shaft for the ventilation of this lode was set on Saturday last, to sink from surface 20 fms., at 15s. per fathom, by six men. Our tutwork men for August are 37, and tributers 36. The tribute pitches, on the whole, are looking just as they have been for some time past. The following is an account of the number of fathoms of ground sunk in the mines for the last 12 month: 110 fms. 3 ft. 9 in., and driven 317 fms. 2 ft.; the average gettings of the tutwork men for the same time is 33s. per man per month, and of the tributers 40s.

WHEAL TREHANE MINING COMPANY.

The usual two-monthly meeting of adventurers was held at Liskeard, on the 9th inst., when the accounts for March and April were passed, showing—Balance last account, 67*5l.* 17s. 9d.; ores sold to the Tamar Smelting Company, 1435*l.* 0s. 9d.; sundries, 2*l.* 16s. 6d.=2113*l.* 15s.—To labour cost for March and April, 786*l.* 13s. 6d.; Trelawny adventurers, for use of engine two months, 55*l.*; rent of field, 19*l.* 1s.; dividend declared May 25, 512*l.*; dues, 93*l.* 6s. 9d.: leaving balance in favour of mine, 647*l.* 13s. 9d.—A dividend of 30s. per share was declared and forthwith paid.

The following report from Capt. S. Richards was read:—

Aug. 9.—In the 68 there is but little alteration in the appearance of the lode since my last report. In the north end it still contains some good lead. In the south level, the lode is inclining westward as we leave the disordered ground; it is about 18 inches wide, and has a similar appearance to the lode in the 62, only a few feet behind a rich lode. We are now stoping both north and south of the winze, in the back of the 62 fm. level, where the lode, on an average, is worth full 1½ ton of lead per fathom. The lode in the stopes in the back of the 55 fm. level is producing about ¾ ton of lead per fm. In the back of the 45 fm. level the stopes are yielding 7 cwts. of lead per fm. The cross-cut in the 30 fm. level is driven about 70 fms. We have seen some small branches, containing mundic, and have just opened a little on the most promising one, but not far enough to find its exact bearing or underlay. The ground is moderate for driving. We sampled, on Wednesday last, a very rich parcel of ore, computed 59 tons, and also a parcel of No. 2 (72 tons) to be sold to-morrow.

WHEAL VINCENT MINING COMPANY.

The usual two-monthly meeting of adventurers was held at Kelvedon, Essex on Wednesday, the 11th inst.—JOHN PARLEY, Esq., in the chair.—The minutes of the last meeting having been confirmed, and the cost-sheets for June and July passed, Mr. Wiseman, one of the deputation appointed at the previous meeting to visit the mine, entered into a lengthened and satisfactory statement of the prospects and position of the mine, which produced evidence of confidence and satisfaction to those present. The statement of accounts showed it necessary that a call of 10s. per share be made payable on or before the 1st of October, when the mine, it is expected, will be in a profitable position, and free from any liabilities.—The following reports of Capts. Hoskins, Gregory, and Luke, who had been requested to furnish their opinions of the general character of the mine, were read, in addition to that of Capt. Spargo, the managing agent:—

The engine-shaft is sunk 10 fms. below the adit level, in soft decomposed granite, but it appears to me that the lode in this locality is not often found productive of mineral in this kind of slate, for almost in every place of working that has come under my notice, particularly where the lodes make rich, I find the ground far more compact, and containing a greater quantity of quartz. It is intended to cross-cut at the 10 fm. level, but I should recommend sinking on to a 30 fm. level, at least, with all speed. The machinery erected for draining the mine is of sufficient power to enable you to sink to a greater depth, and, as before hinted, I think you would do well to push this important part of your workings with all possible dispatch. The north lode appears to have been worked on near the surface by the ancients for a considerable distance, and there is every probability that immense quantities of tin must have been raised; 14 fms. below the surface the lode is quite regular and compact, containing gossan, quartz, &c., and producing good stamps work. From the nature of the lode in this level, I am of opinion that it will improve every fathom you sink, and that ere long you will be in a position of making good returns from this part of the mine. The south lode is large and productive; in fact, I have not seen a more promising lode for many years past. From what I have seen in this mine, I have every reason to believe, that if the lodes already opened on are fully prosecuted, the Wheal Vincent will make a profitable and lasting mine, and amply repay the shareholders for the capital already expended, and for what more that may be required to bring the mine into a complete state of working.—JAMES HOSKING.

I beg to tell you that a more promising lode I never saw in the bowels of the earth—in fact, the south lode is already a good paying lode. The tin is of the best quality, and as the season comes on, so that you may get sufficient water for the stamps, you cannot fail of making good returns. As to the north lode, I never saw a lode more like the gossan of the South Caradon lode than this; I was at the cutting of Caradon lode, and comparing the gossan now breaking, no man can know the difference from that and some of the Caradon, just before they cut the course of copper in the South Caradon Mine—of course you must go a little deeper; I think it a good plan to drive upon the course of the lode when cut in the engine-shaft. When you are cross-cutting, as to the mode of working, I cannot see that you can do better than you are now doing. You will shortly have plenty of water to work your stamps, which will make up for the dry season. I have been in this neighbourhood for 23 years, and never saw water scarcer than at the present time.—SAMUEL GREGORY.

The ground in the bottom of the engine-shaft is getting more favourable; and, as we drive to hill on the course of the lode, we shall get into a very congenial strata. We have six men stoping on the north lode, and are breaking some good work for the stamps; we have 8 fms. of stopes now open on this lode. The tin is very good, although it does not appear in the stone as that of the south lode; but, when bruised down, it makes a very good vein of tin. We intend to stope both east and west; and should it continue as at present, it will turn out a good quantity of tin. I have set the men to stope at 2*l.* 10s. per fm.; the south lode is still looking well. I have set six men to drive up the deep adit, as I reported, to unwater the lode 10 fms. deeper than the shaft; the lode appears to be getting larger, and carrying some good work for tin; I have no doubt but it will be much improved as we drive on; the men in stoping on this lode have broken a good pile of work. We are just now in a position to break tin on both lodes. Although I cannot exactly state what tin we have now at surface, as we have not yet commenced stamping our best work, I shall be a better judge when I see it in the stamp pit; but I should consider we have better than 3 tons at surface. But you will bear in mind, that we have only now just opened ground to break tin; therefore, we calculate that, if the lodes continue as at present, we shall be breaking sufficient to keep both stamps going; and we expect shortly to have plenty of water. We are getting on as fast as possible with the new stamps; we have planned it so as to take the water after passing over the engine-wheel, which obliged us to bring up a deep cutting; it will come 10 fms. in the stamps-wheel; our engine-shaft is down 10 fms. We have sunk for a fork a little deeper than the floor we are driving to cross-cut the lode. I can assure you I am pushing everything to the uttermost; furthermore, I beg to say, the mine is turning out equal to my expectations, and I believe equal to anything before stated; and, judging from the history of other young mines, I do not see but Wheal Vincent does far exceed any one in the market; and I can assure you she is bidding fair to become a good dividend-paying mine.—J. SPARGO.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

KINGSETT AND BEDFORD.—We learn that a requisition has been sent by several leading proprietors, *requesting* the committee to convene a meeting of the adventurers, "for the purpose of making inquiries respecting the meeting holden at the mine on the 6th day of August last, and to the resolutions, accounts, calls, &c., said to have been passed at such meeting, as per circular, dated the 9th inst.—the whole of which being contradicted by a shareholder in a letter, inserted in the *Mining Journal* of Saturday last, and regret from inquiries to find the same to be correct."—The requisition is signed by Messrs. W. Channing, T. M. Bedford, J. Jury, E. Pope, F. Channon, John Channon, C. L. Hawkins, and T. Cooper, and is addressed to Capt. Fulford, the chairman.

NORTH ROSKEAR.—We are glad to find, from reports on which we can place every reliance, that the mine has been for some time past, and still is, making valuable and important discoveries.

SOUTH WHEAL JOSIAH.—I am glad to inform you, that a discovery has been made here, and that the mine promises well. Shares are being inquired after, at advanced prices.

WHEAL ZION.—This mine, which is in the immediate vicinity of Gunnis Lake, may be said to be at the eastern end of the Heignston granite; Wheal Maria, Josiah and Emma being north and north-east: Wheal Zion south and south-east, at a like distance from the granite, and the strata and gossan of the same nature and quality. No engine will be required for some time; and, indeed, with industry and economy being observed, I cannot help thinking that this adventure holds out good prospects of successful returns.

WHEAL NEPTUNE.—We learn that active operations are about being resumed by the body of adventurers who have lately secured this sett.—At Wheal Gray, which is now embodied therewith, a discovery has been made at 9 fms. from surface, holding out good prospects.

MINING IN IRELAND.—We are glad to learn that measures are likely to be actively taken for prosecuting the lodes in the western part of Ireland; but we believe nothing will be effectually done until the decision of the corporation, as to investment, is arrived at, which would give a great impetus.

[From the *Plymouth Journal.*]

BIRCH TOR AND VITIFER MINES.—*Old Vitifer Lode:* I have happy to say that the lode in Dunstan's shaft is improved since my last report; this shaft is 8 fms. below the 10 fm. level, and the ground that is laid open will pay the adventurers a good profit when taken away. The 10 fm. level, east of this shaft, is much improved this last week; I am happy to say the ground in the 10 fm. level west of this is much better for driving, and the lode is improved. We are clearing the adit between Dunstan's shaft and the old engine-shaft with all possible speed.—*North Lode:* The ground in the cross-cut is hard.—*Birch Tor Lode:* There is no falling off on this lode. We have completed the new railroad from Prideaux's shaft to the stamps, which are connected with the old engine-wheel, to stamp the work from the eastern part of the mine.

WHEAL FRANCO.—The captain, in his report yesterday, states that the lode in the 62 fm. level, west of the engine-shaft, is 5 ft. wide, and, although not rich, is a kindly lode; the lode in the 62 fm. level, east of the engine-shaft, is large, and produces occasionally good stones of ore. The lode in the 32 fm. level, east of Spry's shaft, is large and orey throughout; the ground here is hard for driving. There has been no alteration in the tribute department during the last month. Saturday last being our setting day, we set a winze to sink in the bottom of the 47 fm. level, east of the engine-shaft, in order to communicate as soon as possible with the 62 fm. level. Having again a good supply of water, our machinary is in full operation. The next sampling will be about 120 tons.

PLYMOUTH WHEAL YEOLAND.—The north lode has improved within the last fathom but will not as yet pay for sinking.

WHEAL ANDERTON.—The bottom levels in this mine looks well; the driving of the 80 west, to cut the very promising lode seen in the costean pit, is progressing favourably.

WHEAL RUSSELL.—We learn from a correspondent that the tin raised from the back of this copper lode is sufficient to meet the present costs of the mine.

BEDFORD UNITED looks well; a dividend will be declared at their meeting next week.

THE COLLIERY EXPLOSION AT ABERDARE.

Another of those frightful events that have now become of almost weekly occurrence in colliery districts has occurred at Aberdare, in the coal basin of Glamorganshire, by which, at one moment, no less than 52 human beings were flung into eternity. Even here, in the midst of cholera, which is sweeping away our working men by hundreds, and threatens to go on until the depopulation of the district is achieved by that mysterious power, the horrible catastrophe which has just happened has almost paralysed the minds of the public, and leaves a state of bewilderment and stupor which it is difficult to imagine.

Last Saturday morning 112 colliers descended the Lletty Shenkin Colliery, in the parish of Aberdare, the fireman having preceded them to ascertain the state of the pit. He found that though fire-damp was in some two or three parts, intimation of which he gave the colliers by the accustomed signals, yet that the works were sufficiently free to allow the men to proceed with their work. It was not observed by those poor fellows, however, nor by those appointed to inspect and conduct the colliery operations, that great atmospheric changes had that day taken place, which had an important influence upon the atmosphere in the pits, and about 4 o'clock in the afternoon, just at the time when the men were busily at work below, a cloud of smoke issuing from the mouth of the pit was the only indication that an explosion of fire-damp had taken place. Yet this simple indication—unaccompanied by any report or noise, unattended by the groans and cries which herald death from great accidents—was the sole announcement of the explosion which had just taken place in the bowels of the earth. In a few minutes afterwards, however, the whole neighbourhood was alarmed. The people had observed it, and the screams and cries of those who saw it immediately drew hundreds to the mouth of the pit, when, horrible to relate, it was too quickly discovered that no less than 52 had fallen victims to the terrible fire-damp and its accompanying choke-damp.

The effect of this calamitous occurrence upon the neighbourhood is awful in the extreme. There was at first a frightful suspense; and mothers and wives awaited with torturing agony the bringing of the poor fellows who had been sacrificed to the surface. As soon as the first batch of bodies, blackened and scorched, almost beyond recognition, was brought up, the rush of the poor women and friends was a bitter spectacle for even a stranger to witness. It was a scramble—almost a struggle—as the wretched creatures tore one another aside to lay hold on each black corpse, to see if their worst fears were realised. And when here and there a corpse was recognised, the screams of anguish were frightful to hear. Scarce a cottage in the neighbourhood that had not been forsaken by its inmates, all drawn out by fear and sickly hope. And scarce a cottage at night but contained one or more of the bodies of those who had that morning gone to their hazardous labour in the bowels of the earth, with their accustomed health and cheerfulness.

The cause of this frightful occurrence may be briefly stated. The "oldfire," which had not been beaten out by the earliest who had gone into the levels, had still lingered about; and when the men, with their usual indifference, believing all was right, took off the tops of their Davy lamps, and worked by the light of the naked candle, which enabled them too add a little more to their wretched earnings than they could have done by the dimmed light of the gauze lamp, some of the "oldfire" traversed that way, came into contact with the light of the candle, and instant explosion was the result. More frightful spectacles than some of the bodies presented it would be almost impossible to conceive. I saw one poor fellow whose skull was literally blown into two parts, the upper part, with some portion of his arms and legs, being still in the pit. Others presented the most frightfully mutilated features and blackened, scorched up bodies. There were children there, too, of tender age, whose little frames were scorched up, and shrivelled frightfully; while the hair was completely burnt off their heads, leaving their skulls bare. Indeed, so horrible a calamity has never occurred in Wales before, and I pray God I may never see its repetition. A Government Commissioner, who chanced to be in the neighbourhood, is now proceeding with an investigation of the occurrence. He is assisted by two or three experienced surveyors of this locality, who we have no doubt will gather together a mass of most extraordinary evidence for the consideration of a committee of the House of Lords, before whom an inquiry will shortly be made, with a view, we hope, of effectually remedying the glaring defects in the management of some collieries in this part of Wales.

The whole of the unfortunate creatures who were thus suddenly cut off were decently interred on Sunday, at the expense of Mr. Thomas, the proprietor of the works, in the various burial-places of the neighbourhood. Thousands of spectators were gathered together, and there was scarcely a dry eye present.

THE AWFUL COLLIERY EXPLOSION AT ABERDARE.—From the latest accounts received from the locality, we learn that, in addition to the 42 colliers whose bodies were brought up dead, 10 died after being brought to surface, 15 recovered, having been rendered insensible from suffocation, 35 were unhurt, and 12 colliers were not down at the time—thus making the total of 114 belonging to the colliery. Of those whose lives were thus lost, many have left widows and orphans, in many instances four and five children, to bewail their loss; while parents have been bereaved of their offsprings of 8 to 10 years old. It is to be supposed that Lord Ashley's Act is not known, or put in force, in Glamorganshire, which prescribes the employment of children, or we should not have the painful duty imposed of recording the deaths of upwards of 15 out of the number, whose tender ages were such as would not justify their employment in the performance of duties of so hazardous a nature.

ACCIDENTS.

Twidale.—A youth, named Young, fell backwards into a pit, last week, and after a descent of 90 yards, his flannel frock was caught by a piece of projecting rock, by which he was suspended till he was rescued, uninjured.

Growcas, Camborne.—J. Jones, aged 42, whilst employed in raising stone at Gernick Quarry, was killed by a large mass of rubbish falling on him.

Bilston—A Boy Drowned in an Old Pit.—Thomas Downs, four years of age, accidentally fell into an old pit near Riley's field. The pit was not deep, but there was water at the bottom, and the boy was found in it by George Davis, a miner, who descended in search of the body.

Wolverhampton.—Charles Herbert, whilst "holing" in a coal pit at the Rough Hills Colliery, was knocked down by the coal falling sooner than he expected. He received two severe cuts on his head, became insensible, and died about twenty minutes after the accident.

Explosion in a Stone Pit at Wednesfield Heath.—Andrew Holding was dreadfully burnt by an explosion in Southall's pit. At the inquest on the body, Thomas Farren, another miner, who was at work with the deceased at the time of the accident, and was more badly burnt than Holding, stated that the pit was tried with a safety-lamp previously to their commencing work, when no sulphur was found. They used naked candles to work by, as was their custom after the pit had been examined with a safety-lamp and pronounced safe by the doggy; and he could only account for the explosion from the hot and muggy state of the weather upon the morning in question. The pit was well ventilated. The jury returned a verdict to the effect that the deceased died from an accidental explosion. —*Wolverhampton Chronicle.*

Dudley.—Thomas Skelding was seriously injured by a fall of coal, at Mr. W. Haden's colliery at Dixon's-green. Among the injuries the poor fellow sustained was a fracture of his right thigh, which was speedily reduced by Mr. S. Woodall, pupil of Mr. Thomas Fereday, the colliery surgeon, and the sufferer is progressing favourably.

Camborne.—As a miner, named J. Oats, was at work in Tincroft Mine, on Wednesday last, he received a severe fracture of the skull—little hopes are entertained of his recovery.

THE RECENT STRIKE AT CYMMER COLLIERY.—In consequence of a "strike" amongst the colliers employed by Messrs. Insole, at Cymmer Colliery, in Rhondda Valley, legal proceedings were taken against seven of the principal parties, to compel them to act up to the terms of a contract entered into between their employers and themselves. It appears the strike commenced on the 18th July, and Messrs. Insole having suffered large pecuniary losses by the cessation of their colliery operations, they determined to make an example of the ringleaders, who were summoned before the magistrates at Llantrissent; but as the men did not appear, the case was heard *ex parte*, and they were sentenced to a short term of imprisonment in Cardiff gaol. This lesson, however, did not produce the desired effect. The workmen who were at large continued obstinate, and at length summonses were taken out against 13 more of them. On Friday week, the day appointed for hearing the case, the colliers attended in large numbers at the Llantrissent Petty Sessions, accompanied by Mr. Owen, solicitor, of Pontypool. Mr. J. H. Insole appeared for the proprietors of the colliery, attended by Mr. John Bird, solicitor, of Cardiff. After a lengthened discussion, which had reference chiefly to the prices paid for the work, which the men deemed insufficient, the magistrates suggested that the men should withdraw with Mr. Insole and his agent, and endeavour to settle the matter amicably. This course was adopted with success—Mr. Insole consenting to cancel the agreement, and to have the prices settled by arbitration, but insisting that the men should return to their work as soon as the colliery should have been inspected and declared fit to receive them.

THE STRIKE IN SOUTH STAFFORDSHIRE.—The turn out of colliers in South Staffordshire extends, and promises to be all but universal. About 500 of the thick coal men in the neighbourhood of Netherton and Brierley-hill cease work to-day. Instead of quietly submitting to a reduction of 6d. per day, as proposed by the masters, the men now require an advance of 6d. on their previous wages. Although some thousand colliers are out upon strike, at present everything appears comparatively quiet and peaceable.

MEXICAN BONDS.—A meeting of the holders was held yesterday, at the committee-room of the Stock Exchange, when the following resolution was adopted:—"That the meeting, without expressing any opinion as to any of the articles of the agreement between Mr. Robertson and the Mexican Government, protests against any payment being made wholly or in part of any coupons falling due subsequently to the 1st of January, 1847, until the balance now due upon the coupon of the said 1st of January be fully paid; and that Messrs. Louis Cohen, J. Capel, F. Harrison, L. Levy, W. H. Mullens, L. Samson, and C. Stokes, be requested to act as a committee, for carrying out such measures in connection with the subject as may be deemed expedient."

RAILWAY INTELLIGENCE.

MIDLAND RAILWAY.—The report of the committee of shareholders is printed and will, we expect, be in the hands of the proprietors this day. It appears that the accountants (Messrs. Quilter and Co.), are at issue with the committee on sundry points. As an instance, it is stated that, in the opinion of the accountants, the following sums have been erroneously charged to capital, instead of revenue:—Rails, chairs, &c., 300,000*l.*; interest on unproductive capital, 141,000*l.*; bad debts, 50,000*l.*—together, 776,000*l.* The committee, on the other hand, maintain that of these alleged misappropriations, the only sums which ought fairly and properly to have been charged to revenue are:—Labour in relaying, 24,000*l.*; depreciation of stock, 34,600*l.*; and for interest, works, &c., nil.—thus making a total of 58,600*l.*, or a difference of no less than 717,400*l.*, which, doubtless, will meet the attention of the shareholders.

LONDON AND NORTH-WESTERN RAILWAY COMPANY.—The half-yearly general meeting of proprietors was held at the Euston-square station, yesterday —Mr. G. C. GLYN in the chair.—The receipts for the past half-year amounted to 647,917*l.*, which is considerably less than that of the corresponding half-year of 1848, and much more so than the preceding two years. The diminution of the passenger traffic, as compared with the same period of the past year, being 22,189*l.*, the cattle traffic showed a diminution of 1772*l.*; while, on the other hand, the merchandise department had been augmented 47,900*l.*, subjected to a comparatively trifling increase of expense; the working charges, exclusive of rates and taxes, were 35·9 per cent., and including those items 40·9. From the statement of the half-year's accounts, it appeared that the net proceeds were 517,194*l.* 6s. 10d., to which add balance from last account, 71,493*l.* 12s. 11d., gave a total of 588,687*l.* 19s. 9d., from which was to be deducted an allowance for renewal of rails of 7525*l.*, giving a disposable balance of 581,162*l.* 19s. 9d., which, after declaring a dividend at the rate of 7 per cent. per annum, amounting to 565,661*l.* 0s. 8d., left a balance of 15,501*l.* 19s. 1d. to be carried to next half-year's account.

GREAT WESTERN RAILWAY COMPANY.—The half-yearly general meeting was held on the 16th inst., when, previous to the reading of the report, a question was put to the chairman, as to the misappropriation of 45,000*l.* by Mr. Stevens, the solicitor to the company, which was admitted; it appearing, however, there was a set-off for legal services, and some chance of the greater part of the money being recovered.—An animated discussion took place as to the position of Mr. Saunders, the secretary, with the South Devon Railway, which was, however, explained to the satisfaction of the meeting.—The chairman observed that, in the first four months of 1848, from January 1st to April 30th, they had worked 279 miles of railway; and the earnings for that period had been 297,166*l.*, or 62*l.* 2s. 7d. per mile per week. During the corresponding period of 1849, they had been working 306 miles of railway, and earned 304,195*l.* —giving 57*l.* 19s. 9d. per mile per week, or about 4*l.* less per mile per week than in 1848. In the two months from 1st of May to 30th June, 1848, they worked 279 miles; their earnings were 195,470*l.*, giving a rate of 80*l.* 7s. 11d. per mile per week; and in the corresponding two months of the present year they had worked 229 miles, earning 161,044*l.*, or a rate of 80*l.* 14s. per mile per week.—In the course of the proceedings, it was stated that, while the financial statement of June, 1848, represented the liabilities of the company to be 80,000*l.*, a sum of 156,000*l.* had since been paid for parliamentary expenses, incurred previously to that time; Mr. Saunders, however, denied that the accounts delivered in June, 1848, or at any other time, had stated the liabilities of the company.—A dividend for the half-year ending June 30, to be paid, after the 1st Sept. next, at the rate of 4 per cent. per annum, was declared. Mr. Atkinson, having been appointed as auditor, the meeting separated.

OXFORD, WORCESTER, AND WOLVERHAMPTON RAILWAY COMPANY.—The half-yearly meeting of this company is fixed for the 31st inst., which has been twice adjourned, in order to give the committee further time for completing negociations now pending. It is expected that a proposition will be made by one of the contractors for completing a portion of the line on his own responsibility, taking as security the tolls to become due on the opening.

SOUTH WALES RAILWAY.—The contract for constructing the Chepstow bridge, for this railway, has been taken by Messrs. Smith and Willey, engineers, of Liverpool. The whole is to be constructed of wrought-iron, the largest span being about 300 feet, resting on cast-iron piers or pillars, sunk down to the rock. Contract No. 2 has just been taken by Messrs. Rennie and Logan, and about 150 men have already been put on this contract, reaching about four miles distance on the Maindee estate, near Newport. The cutting is 40 feet deep. We understand the several contracts from Newport to Chepstow have been taken by Mr. Sharp and others. The opening of the line throughout will, it is confidently hoped, take place in about 12 months.

STOCKTON AND DARLINGTON RAILWAY COMPANY.—The half-yearly meeting was held at Darlington on the 15th inst., but, for some reason best known to the directors, reporters were not allowed to be present. Certain new directors were appointed, and the meeting adjourned for a month, leaving it to the board of directors in the interim to mature certain arrangements connected with the shares.

CHELTENHAM AND OXFORD RAILWAY COMPANY.—This railway, an Act for which was obtained in 1845, has not yet been virtually commenced. The half-yearly meeting takes place on the 29th inst., when it is expected that measures will be taken for winding up the concern.

NORTHAMPTON AND BANBURY RAILWAY COMPANY.—The half-yearly meeting was convened to have been held at the Euston Hotel, yesterday, but there not being a sufficient number of shareholders present, the same was adjourned. It appeared, from a statement of accounts, that the receipts had been 27,849*l.*, and that after all expenses had been paid, there was a balance in the hands of the company, including 17,000*l.* lent to the London and North-Western Company, of 26,980*l.* 12s. 6d.

BUCKINGHAMSHIRE RAILWAY COMPANY.—The half-yearly meeting took place, at the Euston-square station, yesterday.—Sir HARRY VERNEY in the chair.—The proceedings possessed but little interest, excepting the announcement that the directors had "taken steps for closing and settling all outstanding liabilities for those expensive and unfortunate contests which followed the introduction of the broad-gauge into the Buckinghamshire district."—Major-General M'James having been appointed auditor, the meeting separated.

VALE OF NEATH RAILWAY COMPANY.—The seventh half-yearly meeting of the proprietors was convened for the 16th inst., to be held at the White Lion Hotel, Bristol, but there not being a sufficient number of shareholders present to constitute a meeting, it was declared dissolved.

INCREASE OF RAILWAY CAPITAL.—The amount authorised to be raised by bills that have received the Royal assent during last session is 3,434,500*l.*, with 868,146*l.* by loan—making a total of 4,302,664*l.*, in addition to the amount of capital previously existing.

RATING OF THE PRESTON AND WYRE RAILWAY.—The question of how the Preston and Wyre section of the Lancashire and Yorkshire Railway is to be assessed will be again brought before a judicial tribunal for consideration, the company having given notice of appeal to the next quarter sessions against the decision of the magistrates at petty sessions, on the 28th July.—*Preston Chron.*

IPSWICH AND NORWICH RAILWAY.—This line is quietly but gradually extending towards Norwich—indeed, it is now laid down to Flordon, which village was made alive on Monday by a party of gentlemen from Norwich and the neighbourhood, who, with Mr. Mitchell, the engineer of the works, Mr. Patrick Ogilvie, and about 100 workmen took a trip from Flordon to Diss and back.—*Bury Herald.*

The railway calls already announced for this month amount to 1,124,346*l.*; in the corresponding month last year they were 3,112,773*l.*

WINDING-UP OF RAILWAY COMPANIES.—There are at present in process of being wound-up under the provisions of Joint-Stock Companies' Act and the superintendence of the various Masters in Chancery, 52 railway companies:—they are, the Exeter, Dorchester, and Weymouth Coast Railway Company: the Galway and Ennis Grand Junction Railway; the Glocester, Aberystwith, and Central Wales Railway; the Grand Trunk and Stafford, and Peterborough Railway; the Great Munster Railway; the Great Western Extension Atmospheric Railway; the Great Western, Southern, and Eastern Counties Railway; the Hereford and Merthyr-Tidvil Junction Railway; the Hull and Gainsborough Railway; the Ipswich, Norwich, and Yarmouth Railway; the Irish West Coast Railway; the Metropolitan Railways Junction; the London and South Essex Railway; the London and Manchester (Remington's) Railway; the London, Bristol, and South Wales Railway; the London and Birmingham Extension Railway; the Larne, Belfast, and Ballymena Railway; the Lancaster and Newcastle Direct Railway; the Bridgewater and Nunhead Railway; the Brighton Junction Railway; the Brighton, Lewes, and Tunbridge Wells Direct Railway; the Cambrian Grand Junction Railway; the Cameron's Coalbrook Railway; the Cambridge and Colchester Railway; the Chepstow and Glocester Junction Railway; the Chester Junction Railway; the Direct East and West Junction Railway, the Direct Exeter, Plymouth, and Devonport Railway; the Direct London and Exeter Railway; the Direct London and Manchester Railway; the Direct London and Portsmouth Railway; the Dover and Deal Railway; the Dublin and Armagh Railway; the Eastern Counties Extension Railway; the Eastern and Northern Counties Railway; the Ely and Bury St. Edmunds Railway; the Axholme and Gainsborough Railway; the Barnet and North Metropolitan Railway; the Bedfordshire and Hertfordshire Railway; the Northampton, Lincoln, and Hull Railway; the Northern and Southern Railway; the Peterborough and Nottingham Railway; the Port of Wisbeach and Peterborough Railway; the Rugby and Worcester Railway; the Wolverhampton and Birkenhead Railway; the Sligo and Shannon Railway; the South and Midlands Railway; the Trent Valley and Holyhead Railway; the Tring, Reading, and Basingstoke Railway; the Waterford and Carlow Extension Railway; the Worcester, Tenbury, and Ludlow Railway; the Warwick and Worcester Railway; the York and Lancaster Railway. Original allottees in all these schemes are liable to become contributories under the provisions of the Act

HOLME PARK MINING COMPANY.—We observed in our last week's Journal that, on application at the office of the company, the secretary was found to be *non est inventus*. Certain proceedings in the civil and criminal courts, during the past few days, too fully describe the cause. In an action at the Croydon Assizes, on the 11th inst., Delfosse *v.* Hollis, on a promissory note, the defence set up was that the bill, professing to be accepted by the defendant, was a forgery, inasmuch that after the acceptance of the bill certain words, "to order value received," had been added, with the view of making it negociable. The facts are simply these: the defendant was induced to join a company, formed for working the Holme Park Mines, and accordingly took up 10 shares, paying a deposit of 1*l.* per share; and, furthermore, 35 shares, for which he gave his note of hand, but not payable "on order," or stating "value received." The leases of the mine, it appeared, had not been obtained, and the concern might be denominated a bubble scheme. The bill, however, with the additional words, got into circulation, and an action was brought for the recovery of the amount. Evidence being given that the bill had been altered, a verdict for defendant was given by the jury. On Wednesday Mr. D. Lloyd, the secretary of the company, was charged at Bow-street with committing a forgery, by the insertion of the words above referred to, the intent in giving the promissory note being merely as security for the payment on the 35 shares on completion of the leases. The whole of the body of the note, with the exception of the signature, it appears, was in the hand-writing of Mr. Lloyd. The note was drawn at the offices of the company, 18, Adam-street, Adelphi. A Mr. Stephen Thomas gave evidence that the words were not in the body of the note, on application being made to him to cash the same. This witness admitted that 365 shares were apportioned to him free of any cost, in like manner as to the prisoner, a part of which he had sold to the prosecutor. The witnesses being bound over, the prisoner reserved his defence, and was fully committed for trial.

BRITANNIA BRIDGE.—At the meeting of the Chester and Holyhead Railway Company, on Thursday, the following report from Mr. Robert Stephenson was read:—"The masonry of this contract is completed as far as practicable, prior to the floating of the tubes; awaiting that operation, the progress of the remainder will depend upon the lifting. In this latter proceeding there has been some delay, owing to an unsoundness in one of the large castings of the new hydraulic press in the Anglesea Tower, which occasioned so much leakage, as threatened at one time to render a new casting necessary, which would have delayed for several weeks the process of lifting the tube, which has been, as you are aware, floated into its position for being raised. I have, however, the satisfaction of reporting that the leakage has been successfully stopped, and that the operation of lifting is progressing, and might by this time have been completed; but I have deemed it prudent to lift by short stages only, and to build up step by step underneath with brickwork, in order effectually to guard against the serious consequences which might arise from any failure or derangement of the hydraulic presses, whilst the tube was suspended from them. Such an accident I believe to be very improbable; but, after the fracture that took place in one of the cross-heads during the lifting of the Conway tubes (which was fortunately discovered in time to prevent a very serious disaster), I do not feel that I should be justified in omitting in the case of the Britannia tube (where a mishap would, in all probability, interfere permanently with the navigation of the straits) any one expedient which caution can suggest. With these feelings, therefore, I have, with your sanction, resolved to follow the course alluded to, notwithstanding it will protract the time of lifting in each tube a fortnight or three weeks beyond the period originally contemplated. The arrangements for floating the next tube (which, with that already being lifted, will enable us to complete one line of rails across the straits) are in a very forward state, and will certainly be ready by the 24th inst., with a view of taking advantage of the spring tides of the 7th and 10th of September, if it should be deemed expedient to do so. Upon this point I am hardly able to decide positively at this moment, for if any delay should take place from some unforseen contingency, it may be advisable not to float the next tube until the following spring tides. No great loss of time would ultimately arise out of this postponement, as the interval would be occupied in removing the presses from their present positions into those for lifting the second tube; and some advantage would be gained by lessening the time during which the principal channel for navigation would be interfered with. On the other hand, I think it very desirable not to allow the season to advance further than absolutely necessary before the next floating takes place. This latter consideration appears to me so important that we shall not fail to avail ourselves of the spring tides from the 7th to the 10th of September, if consistent with the further consideration of the circumstances I have mentioned as affecting the question. The present arrangements will, I believe, admit of one line of railway being completed in the course of November. This conclusion is arrived at from the results of our recent experience, and cannot far mislead; but I am bound to add, that the operations are so dependent upon casualties which man cannot control, that the most careful calculations as to time may not be exactly verified. I do not, however, see any reasonable grounds for doubting that one line will be finished throughout by the date above-mentioned, or, at the latest, before the end of the year."—[We gave the particulars of the financial position of the company in last week's Journal.]

Death of John Williams, Esq.

We deeply regret to announce the decease of a gentleman who, on account of the important position which he held in connection with our commercial interests, and still more for the personal virtues which shone throughout his life, will be long and sincerely lamented, John Williams, of Burncoose, Esq., who died on Saturday last, in the 72nd year of his age. As the head of the Cornish house of "John Williams, jun., and Brothers," and of the Swansea Smelting Company "Williams, Foster, and Co.," we need not say to any one familiar with these names how high and honourable a position he held in the circle of commerce. In this relation, however, it is rare that any man is so eminent but that others are found to replace him. But the qualities which are characteristic of the man—the warm, expansive charity—the looks and tones of kindness—the ready offices of friendship—the spirit of forbearance with wrongs—and enlarged philanthropy—these, once lost, are lost for ever; and by many a sorrowing friend of the deceased it is felt that the blank thus created can never be filled. The crowning grace of Mr. Williams's character was one which has been beautifully and appropriately styled "the magnanimity of meekness." We doubt if any one who reads this memorial ever witnessed in him, even under those sudden provocations from which, in the business of life, no one can be exempt, a temperance at variance with a disciplined mind or a Christian spirit. We have only to add, that in early life Mr. Williams was led, by a strong religious impression, to attach himself to the Society of Friends, in communion with whom he remained to the period of his death.—*West Briton.*

New Patents.

SPECIFICATIONS ENROLLED DURING THE PAST WEEK.

Specification of patent granted to Edward Newton, of Chancery-lane, civil engineer, for improvements in engines or apparatus principally designed for pumping water. (Being a communication.)—The machinery described consists of a steam cylinder, the free or top end of the piston rod of which forms the piston rod of a pump, so that the same piston rod is common to the steam cylinder and to the pump. The passages for the water into and from the pump terminate in a double passage, so that at the end of the stroke the piston just passes one of these passages, by which arrangement the fluid from before the piston finds its way behind the piston, and thus reduces the power required to work the pump for the moment. The pump valves are placed in a cylinder, and are very nearly similar to those of Messrs. Soutter and Hammond's semi-rotary pump. The steam-valve is worked by tappets fixed on the piston rod. The valve itself the patentee names the B valve, from its being similar to the common D valve, but with a bridge in it.

Claims.—1. The arrangements for moving at the proper time the valve, so that the expansive force of the steam in the cylinder may be able to complete the stroke.—2. The employment in pumps of valves radiating from a centre.

Specification of patent granted to Hugh Lee Pattinson, of Washington House, Gateshead, Durham, chemical manufacturer, for improvements in manufacturing a certain compound or certain compounds of lead, and the application of a certain compound or certain compounds of lead to various useful purposes. The first of these improved compounds is an oxychloride of lead, which is a fine white powder, and applicable to a great many purposes for which white lead is now used. It is formed by a solution of chloride of lead, with a solution of lime or soda, or other alkali (lime being preferred on account of its cheapness). A saturated solution of the lime is thrown into a solution of the chloride of lead, the white powder of the oxychloride is thrown down, and afterwards separated for use.

Claim.—The combination of the chloride of lead with alkalies, to form a pigment, as described.

LIST OF PATENTS GRANTED DURING THE PAST WEEK.

J. Ruthven, Edinburgh, civil engineer, for improvements in propelling and navigating ships, vessels, or boats by steam or other powers. (Being a communication.)

A. Dunn, Worcester, soap maker, for improvements in making soap.

F. W. Bochner, Paris, France, civil engineer, for certain improvements in machinery, or apparatus for letter-press printing.

R. A. Brooman, Fleet-street, London, patent agent, for improvements in machinery, apparatus, and processes for extracting, depurating, forming, drying, and evaporating substances. (Being a communication.)

J. Blake, Mount Pleasant, Eaton, Norwich, surgeon, for improvements in lamps.

J. Young, Manchester, manufacturing chemist, for improvements in the treatment of certain ores and other matters containing metals, and in obtaining products therefrom.

L. Lemaitre, late of Paris, but now of the Hotel de l'Univers, Blackfriars, engineer, for improvements in the manufacture of ferules for fixing the tubes of locomotive and other boilers.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

C. Pinnell, Trellick-terrace, Vauxhall, letter-box.

B. F. Atkinson, Strand, truss.

J. S. Hall, Regent-street, elastic gaiter.

J. James, Bishopsgate-street, City, water trap.

W. Whitehurst, and Co., Oxford-street, graduated carriage spring.

Jennens, Bettridge and Sons, London and Birmingham, writing folio desk.

J. F. I. Caplin, Berner-street, corsets.

R. R. Rapson, Penryn, apparatus for dressing flour, &c.

B. Samuelson Banbury, Oxford, parts of apparatus for cutting turnips, and other roots.

T. Green, Birmingham, a set of metallic fittings and variators for lasts and boot-trees, and shoe-cleaners.—*Mechanics' Magazine.*

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning Eleven o'clock.

Bank Stock, 7 per Cent., 199 200
3 per Cent. Reduced Ann., 92⅝ ⅞
3 per Cent. Consols Ann., 92⅛ ⅛ ⅛
3½ per Cent. Ann., 93⅛ ⅜
Long Annuities, 8⅛
India Stock, 10½ per Cent., 152½
3 per Cent. Consols for Acc. 92⅛
Exchequ. Bills, 1000*l.*, 1¼d. 46 7 5 8 pm.

Belgian, 4½ per Cent., 65
Dutch, 2½ per Cent., 53⅛
Brazilian, 5 per Cent., 85⅜ 5 ⅜
Chilian, 6 per Cent., 93
Mexican 5 per Cent., ex Cap., 27 ⅜
Russian, 5 per Cent., 106 7
Spanish, 5 per Cent., 18⅜
Ditto 3 per Cent., 34⅜

MINES.—The amount of business which has been done lately, and the expected advance in copper and tin, have given a tone of firmness to the mining share market. Public confidence appears to be gaining, and it only requires a stability in our metal market to arrive at business both safe and permanent. The constant inquiry for dividend and leading mines is strong evidence that the mining interest is not likely to be so disregarded as it has hitherto been.

In Tincroft there has been some considerable business done since our last, the reports from the mine more than confirming the discoveries referred to in last week's notice. Treleigh, Trelawny, Bedford, and East and South Tamar, have been in request, and business done. In the latter, a large number of shares have changed hands at an advance. Inquiries are also being made for East Wheal Rose, North Pool, South Basset, South Francis, and West Caradon. In Kingsett and Bedford some considerable improvements are said to have been reported, and shares have found buyers. A requisition for convening a special general meeting has been signed by several adventurers, as noticed in another column. North Roskear, Comfort, Treviskey and Barrier, and West Caradon, are among the mines lately represented as improved.

Shares in the following mines have changed hands since our last—viz.: East Wheal Rose, Devon Great Consols, Trelawny, Treviskey and Barrier, South Basset, Tincroft, Bedford United, Mary Ann, Treleigh, South Tamar, Tregorden, East Tamar, Tamar Consols, Esgair Llee, Wellington, South Tolgus, West Providence, Trehane, Kingsett and Bedford, &c.

Wheal Mary Ann adventurers audited their accounts for March, April, and May, on the 8th instant, showing a profit of 557*l.* 11s. on the three months' workings, which, with the balance left from last account, carries a credit of 1017*l.* 19s. 8d. to the next meeting, when a dividend may be fully expected. The mine is now represented to be in a better position than hitherto seen, and capable of returning 65 to 70 tons per month, and, from present appearances, may be considered a permanent and paying mine.

Wheal Trehane two-monthly meeting was held on the 9th inst. The accounts for March and April show a balance in favour of the adventurers of 647*l.* 13s. 9d. A dividend of 30s. per share was declared, and paid forthwith. We learn that some new steam machinery is about being erected, for which a reservation has been made in the funds. The agent's report represents the mine in a very favourable position, and operations progressing towards some very important points. A parcel of about 131 tons was sold on the 10th.

The Wellington Mines bi-monthly meeting was held on the 10th; the balance in favour of the mines amounted to 448*l.* 15s 3d.; a dividend of 1*l.* 10s. per 256th share was delared for March and April, leaving a balance of 64*l.* 15s. 3d. to next account. The agent reports the lode productive in the 32 fm. level especially, which is the deepest level, and there is every prospect of the course of ore holding down.

The Alfred Consols adventurers met on the 10th, and audited the accounts for February, March, April, and May; the division of loss for the four months amounted to 1*l.* 1s. 2d. per 1024th share. The mine is represented to have considerably improved since the last meeting.

Kingsett and Bedford meeting was held on the 6th, when the accounts for April, May and June were read; the statement shows a balance of 5*l.* 2s. 7d. against the company, to meet which, and future operations, a call of 5s. per share was made, with a sanction for the committee of management to make a further call of 5s., should it be required, before the next meeting. The agents report is highly gratifying; exclusive of the course of lead which they are now working upon, several improvements were anticipated, which we learn have been realised since the meeting.

Vincent meeting was held on the 8th, when the reports of several agents were read, confirming the opinion of, and the mode of operations adopted by the managing agent as being the most satisfactory towards bringing the mine into a profitable position; the statement of accounts was satisfactory, and a call of 10s. by two instalments made, which will free the mine from all liabilities.

Wheal Tregorden account for April, May, and June, was held on the 9th; the accounts showed a balance of 142*l.* 16s. 10d. against the mine, and a call of 10s. per share was made. The mine has much improved since the last account, and continues to hold out prospects of further and immediate improvement; the lead raised here is unusually rich for silver, averaging 27*l.* 18s. per ton.

In foreign mines there has been a fair proportion of business done. United Mexican has been in demand, and several transactions closed. In Alten, Copiapo, St. John del Dey, and Australian, buyers have been found, and bargains effected.

The speech of the President of the Mexican Republic must be looked upon by the English creditor as highly satisfactory, not only to the bondholders, but also to those holding shares in mining companies having claims upon the Government. The United Mexican Company being creditors to the amount of $350,000 for several years in abeyance, have now the certainty of its immediate liquidation. This debt had already been admitted by the Mexican Government, and a commission issued some time ago to examine and arrange the means for its final discharge, and the present resolve of the Government, at once terminates the labours of that commission.

Letters have been received from the Imperial Brazilian Mines to June 4th. The gold return from the 24th May to June 2, from both mines, is reported at 10 lbs. 4 ozs. 10 dwts.; the total, from January 1st, 166 lbs. 7 ozs. 16 dwts. Gongo Soco presents nothing new. At Bananal the big pump vein appears to be the only returning point, until now, that in clearing out some old workings they find the Magalhaes lode productive, and some good work is being returned.

Letters from the Guadalcanal mines have been received, dated 3d August, which advises the progress of operations generally; the engine works well, and the water in fork to the 62 fm. level. The lode in a winze in the 31 fm. level (Pozo Rico shaft) is producing some good work.

In a recent number, we stated that the water in the Linares lead mine was down 18 fms. in the shaft, and that, consequently, the 15 fm. level was clear; nothing, of course, in the shape of ore was expected to be found in this level, but its condition, and the traces of the ore worked away by the Spaniards, would enable the company to form a good judgment of the nature and quality of the lode in the lower levels still unwatered. In a letter from the managing agent, dated August 2, he says, "Captain Curry went down to the first level of the mine on Monday, principally with a view to arrange with the pitmen some necessary work; while there he broke some fine stones of lead ore." He reported the lode as one of a very fine character, where it is left standing, but that the old workings are very extensive, and, consequently, but little comparatively can be seen of the lode. The erection of the engine, &c., &c., is proceeding with great rapidity.

The coinage at the Philadelphia Mint during the first six months of the present year was $2,999,774, of which $2,375,379 were in gold.

The vessel, *Angelina*, just arrived in the docks from Canton, has brought 21 cases of specie. The *William Stewart*, also from Canton, has brought one box of gold dust, and two boxes of treasure addressed, and 74 boxes of treasure consigned to order. The vessel *Hind*, from Accra, one case of gold dust, and one cask of bullion, and the large quantity of 61 casks of guinea grains. The Peninsular Company's steam-ship, *Pacha*, arrived at Southampton, yesterday, with specie to the amount of 11,220*l.*

Reports still continue prevalent of the attempts of Austria to raise a new loan. We understand, that so far as Messrs. N. M. Rothschild and Co., of London, are concerned, no negociations of the kind have been contemplated on their part.

The East India Company have lately effected a sale of 1,000,000 ozs. of silver, and have invested the proceeds in 3¼ per cents.—the transfer of which took place yesterday.

The Great Western Railway meeting seems to have gone off much more amicably than was expected, and the shares are firmer, but sales have been pressed in Caledonian, Midland, and North Western, all of which are lower.

HULL, THURSDAY.—Railway shares are flat, and there is no disposition to buy on the part of the public, although, we think, with perfect publicity, and honest and efficient auditing, they would soon become a favourable security, and take a much firmer and more permanent hold of the accumulations of the country than they have done up to this period.

JOINT-STOCK BANKS.

Shares.	*Companies.*	*Paid.*	*Div. p. cent.*	*Price.*
22,500	Australasia	£40	£3	£23
20,000	British North American	50	6	40
20,000	Colonial	25	5	7⅛
20,000	Commercial of London	20	6	20½
60,000	London Joint-Stock	10	6	16½
40,000	London and Westminster	20	6	24⅛
10,000	National Provincial of England	35	5	34½
20,000	National of Ireland	22½	6	18⅝
20,000	Provincial of Ireland	25	8	40
10,000	South Australia	22½	—	18
20,000	Union of Australia	25	6	25⅝
60,000	Union of London	10	6	10½

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	8	5
1024	Alfred Consols	8⅜	9
1000	Antimony&Silver-Lead	5	—
1024	AshburtonUnited Mines	6¼	12
1624	Balleswidden	9	18
128	Balnoon Consols	42½	50
10000	Bauwen Iron Co.	6	6
1000	Barristown	5¼	1½ 2
1000	Bawden	1	1½ ⅝
4000	Bedford	2⅜	3⅛ 3⅜
1280	Birch Tor Tin Mine	10½	5⅜ 6
8000	Blaenavon	50	12½
5000	Blisland Consols	1	6
100	Botallack	182	25
120	Brewer	5	5
10000	British Iron, Now, regis.	12	8
—	Ditto ditto, scrip	10	10
2400	Bryn-ar-ian	—	6
128	Budnick Consols	52½	10
1000	Callington	22	10 11
1000	Camborne Consols	6	6 6½
20000	Cameron's Steam Coal	7	1
256	Caradon Copper Mine	9½	1⅛
256	Caradon Mines	22½	10
256	Caradon United	24	5 8
256	Caradon Wh. Hooper	21	4½
1000	Carn Brea	15	105
3000	Carthew Consols	1½	5
114	Charlestown	220	—
500	Comblawn	5¼	4½
128	Comfort	45	50 60
256	Condurrow	20	70 75
2560	Cook's Kitchen	14	2½ 3
1000	Coombe Valley Quarry	3½	4½
1000	Copper Bottom	1¼	6½
900	Court Grange	5	10
212	Craddock Moor	23½	5
128	Creeg Braws	120	30
500	Cubert Mine	12½	—
1000	Cwm Erfin	3	2⅝ 3
300	D.Prior& Buckfastleigh	—	—
7100	Derwent	8½	5
845	Devon&CourtenayCon.	7⅝	2 3
1024	Devon Great Consols	1	195 200
1000	Dhurode	2	5
182	Dolcoath	30	15
2560	Drake Walls	5½	3 4
10000	Durham County Coal	45	5
3000	Dyfngwm	10	12½
512	East Alvenney	5¼	6
2500	East Birch Tor	3	3
112	East Caradon	47	47
2048	East Crowndale	6⅜	4
512	East Combe Silver-Lead	6⅜	6½
128	East Pool	15	70
9300	East Tamar Consols	⅜	⅜ ⅞
94	East Wheal Crofty	125	65 70
1024	East Wheal Fortune	2	3
128	East Wheal Rose	50	600
—	East of Scotland Iron Co.	5	1⅛
123	East Wheal Seton	14	10
1280	Esgair Llee	1¼	4 4½
248	Exmoor Wh. Eliza	6	6
494	Fowey Consols	40	45
1024	Freidd Llwydd Mines	1½	3⅛
4000	Gen.Mining Co.for Irel.	1⅜	1⅛
256	Gonamena	44½	16
128	Goonvrea	4	2
256	Grambler & St. Aubyn	80	8 9
100	Great Consols	1000	180
512	Gt.Wh.Rough Tor Con.	18½	18 20
6000	Growa Slate Company	5	5
6000	Heigston Down Con.	1⅜	⅝ 1
256	Herodsfoot	27	15
10000	Hibernian	12½	1⅜
239	Hobb's Hill	6	1½
1000	Holmbush	22	8 10
1024	Kingsett and Bedford	1⅛	3½ 4
787	Kirkcudbrightshire	8½	2½
2048	Lamberoue Wh. Maria	8	2½
252	Lamrth Consols	—	4
128	Lelant Consols	90	40
160	Levant	—	200
1000	Lewis	17	9½ 10
1000	Llwynmalees	8	5½
3600	Llynvi Iron	50	50
253	Lostwithiel Consols	23	10
6000	Marke Valley	10	⅝ 1
5000	Mendip Hills	3½	1⅜ 1½
128	Metha	34	—
20000	Mining Co. of Ireland	7	4
1280	Nant-y-cria	5	5
256	New East Crowndale	3⅜	2½
100	North Pool	45	470 500
140	North Roskear	5½	140
262	North Wh. Leisure	1½	2
256	North Wheal Basset	10	10 12
15000	Northern Coal Co.	23	2
128	Par Consols	55⅜	650
6000	Pennant & Craigwen	2½	2
1024	Penzance Consols 22*s* 3*d*.		3
512	Plymouth Wh. Yeoland	6½	6
200	Polsalth Consols	5½	4½
2500	Rhoswiddol&Bacheiddon	10	10
10000	Rhymney Iron	50	13
10000	Ditto New	7	6⅛
1000	Rosewall Hill	1	5
256	Rosewarva Mines	—	12
2048	Runnaford Coombe Tin	⅜	5
9000	South Tamar	⅛	1⅛ 1⅜
128	South Caradon	5	350

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
1100	South Dolcoath	5	⅛ 1
256	Sth. Friendsh. Wh.Ann	30	28 30
256	South Molton	5	14⅛ 15
256	South Tolgus	16	40 45
256	South Treluwny	28½	5
2000	South Wales Mining Co.	⅜	1 1⅛
128	South Wheal Basset	20½	365
124	South Wh. Frances	160	255
256	South Wh. Josiah	—	3
1000	South Wh. Maria	2½	1⅛
10000	Southern&Western,Irish	2	4
280	Spearne Moor	30	40
256	St. Austell Consols	9	—
94	St. Ives Consols	—	80
128	St. Michael Penkivel	5	10⅛
999	St. Minver Consols	1	6
1000	Stray Park	43	17⅛
9600	Tamar Consols	3	7⅛ 8
1024	Tavy Consols	6⅜	1⅛
6000	Tincroft	7	12⅛ 13
1000	Tin Vale	2⅜	⅛
58	Tokenbury	170	10
256	Tregorden	3⅛	5 5⅛
256	Trehane	1⅛	25
5000	Treleigh Consols	6	2⅜ 3⅛
2000	Tremance	3	—
96	Tresavean	10	95
120	Trethellan	5	15 16
120	Treviskey and Barrier	180	110
288	Treveau	1⅛	1
200	United Mines	50	150
256	Wellington Mines	25	35 38
128	West Buller	10	275
256	West Caradon	20	117½ 20
512	West Fowey Consols	40	12
256	West Providence	9	17½ 20
200	West Seton	45	75 80
120	West Trethellan	5	16
256	West United Hills	—	4⅛
512	West Wheal Frances	1⅛	2
256	West Wh. Friendship	9	8
3725	West Wheal Jewel	12	⅛ 1 ⅛
256	West Wheal Tolgus	80	10
256	West Wheal Treasury	19	4⅜ 5
1024	Whiddon Mines	4⅜	2
5200	Wicklow Copper	5	8⅛ ⅜
107	Wheal Adams	79	30
1000	Wheal Agar	—	6
256	Wheal Albert	10	1
240	Wheal Anderton	25½	15
128	Wheal Ann	—	50⅛
512	Wheal Anna Maria	7	8
1024	Wheal Ash	4⅛	8
120	Wheal Bal	5⅛	15
256	Wheal Benny	14⅜	2
1024	Wheal Bray	10	10
256	Wheal Blencowe	21	12
232½	Wheal Calstock	9	20 25
268	Wheal Courtenay	12⅛	—
256	Wheal Fortescue	15	—
388	Wheal Franco	27	12 15
128	Wheal Harriet	45	—
100	Wheal Henry	—	25
1024	Wheal Lawrence	2⅛	2⅜
112	Wheal Margaret	79	225
512	Wheal Mary Ann	5	25 26
208	Wheal Mary Consols	60⅛	8
360	Wheal Oak	6	7⅛
—	Wheal Penhale	—	4⅛
210	Wheal Prospect	4	7
120	Wheal Reeth	41	150
128	Wheal Rose	60	3
198	Wheal Seton	214	250
180	Wheal Sisters	35⅜	5
494	Wheal Sophia	4⅛	5
128	Wheal Spearne	10	68 70
128	Wheal St. Ann	30	35
550	Wheal Trescoll	9	10 15
260	Wheal Trelawny	7⅜	70
256	Wh.Tremaine(St.Ervan)	9⅛	2⅛
1024	Wheal Tremayne	9⅛	3 4
92	Wheal Tryphena	140	100
1000	Wheal Vincent	2⅜	7
256	Wheal Vlow (Perranz.)	⅜	⅜
184	Wheal Vyvyan	—	60
250	Wheal Williams	28⅜	8

FOREIGN MINES.

5000	Alten Mining Company	14½	2½
15000	Asturian Mining Co.	15	2½
20000	Australian	3	4 4½ 4⅜
10000	Anglo-Mexican Co.	100	¼
12374	Ditto Subscription	25	1½
6000	Barossa Range	1⅜	1⅜ ⅜
3000	Bolanos	150	1
2000	Ditto Scrip	1⅜	1⅜
10000	Brazilian Imperial	23	3
12000	Cobre Copper Co.	40	23
10000	Copiapo Mining Co.	14	4 4½
20000	General Mining Ass'n.	20	14
4000	Guadalcanal	5	6⅜
5000	Kinzigthal Mining Ass.	2	1⅛
5051	Mexican Company	59⅛	—
2000	Mexican & SouthAmer.	8	1 1⅛
5000	National Brazilian	30	3⅛ ⅜
104000	N. Brit. Australasian	1	⅜
7000	Royal Santiago	10	5⅛
11000	St. John del Rey	15	9⅛
13174	United Mexican	Av. 28⅛	4

RAILWAY TRAFFIC RETURNS.

Names of Railways.	*Length.* 1849	1848	Present actual cost.	Price p. share	Div. 1848	*Traffic* 1849	*Return* 1848
Aberdeen	33	16	1,000,547	19⅛	—	£ 765	—
Belfast and Ballymena	37⅜	37⅜	—	19⅛	5*	564	£452
Birkenhead, Lancashire, & Chesh.	19	15	1,088,804	37	5†	1071	933
Bolton, Blackburn, & West Yorksh.	14	—	786,384	7	—	445	278
Bristol and Exeter	75½	75½	2,660,490	65	—	4883	—
Caledonian	141	141	4,865.135	22⅝ 20⅛	3	6692	4431
Chester and Holyhead	84	59½	3,388,217	14	4	2510	1464
Dublin and Drogheda	33½	33½	774,875	29⅜	—	1467	775
Dublin and Kingstown	7¾	7¾	395,915	—	—	2078	1113
Dundee, Perth, & Aberdeen Junc.	47½	47½	544,554	19	6½	1173	1333
East Anglian (Lynn to Ely)	91½	55½	1,167,104	2 ⅜	—	724	634
East Lancashire	75½	24	2,628,519	16	5	3855	1172
Eastern Counties and Norfolk	322	295	12,027,069	8⅛ ⅜	—	15554	16109
Eastern Union	50½	50½	1,712,703	13	—	1783	1394
Edinburgh and Glasgow	57½	52½	2,644,378	41	6	3910	4563
Edinburgh and Northern	78	34	2,232,115	10½	2	2639	1913
Glasgow, Paisley, and Ayr	102½	74	2,574,330	50½	3	3110	2603
Glasgow, Paisley, & Greenock	23	23	848,328	16⅜	2	1208	1439
Gt. Northern & East Lincolnshire	126	—	4,255,171	9⅜ ⅜	5†	2521	—
Gt. Southern & Western, Ireland	168½	110½	3,172,519	32 1⅛	6†	5035	4046
Great Western	230½	206½	11,608,815	72⅛ 4⅛	6⅛	18145	21830
Lancaster and Carlisle	70	70	1,476,102	54⅛	4⅛	3082	2113
Lancashire and Yorkshire	206½	127½	9,218,450	84 5⅛	5	15181	11927
Liverpool, Crosby, & Southport	13	—	84,455	4	—	206	273
London and North Western	435	428	25,077,942	128⅛	7	49585	50179
London and Blackwall	5⅛	4	1,299,675	3⅜ 3⅛	1-12	1078	1244
London, Brighton, & South Coast	170	162½	6,382,281	37⅛ 6⅜	2⅛	15083	14454
London and South-Western	216⅛	194	7,510,689	33⅛	5⅛	12186	10964
Londonderry and Enniskillen	14⅛	14⅛	171,026	16	—	144	163
Manchester, Sheffield, & Lincolnsh.	129⅛	94⅛	6,048,679	34⅛	5	5298	3200
Midland Company	471	423⅛	14,012,340	62⅛ 1	5⅛†	25178	23498
Midland Great Western (Irish)	50	36⅛	725,332	24⅛	4†	1351	861
Monklands	37	—	500,000	—	6	683	—
North British	109⅛	83	3,649,055	13	4⅛	3586	3711
Scottish Central	45⅛	—	1,364,228	22	7	1085	986
Shrewsbury and Chester	48	23	969,618	14⅛	5	1539	651
Shropshire Union	30	—	—	2⅜	—	365	—
South Devon	57⅜	29	1,909,232	12 13.	5	1983	1778
South-Eastern	165⅛	165⅛	8,116,914	21⅛	5⅛	13669	12089
Taff Vale	40	40	879,110	—	7⅛	1900	1870
Ulster	36	36	723,829	45⅛	—	846	749
West Cornwall	13	—	—	—	—	—	—
Whitehaven Junction	12	12	150,879	9⅛	3	255	175
York, Newcastle, & Berwick	269	242⅛	6,827,849	19⅛ ⅜	7	14099	13336
York and North Midland	255⅛	234	4,983,618	29 8⅛	7	9235	9420
FOREIGN RAILWAYS.							
Amiens and Boulogne	76⅛	68	1,462,562	6⅛ ⅜	2⅛	1558	—
Dieppe	26	—	—	—	—	871	—
Dutch Rhenish	57⅛	57⅛	—	6⅛	—	—	1230
Montereau and Troyes	71⅛	71⅛	—	—	—	1146	—
Northern of France	211	211	7,142,890	3⅛ ⅜	—	15760	10920
Orleans to Bourges (Central)	107⅛	107⅛	1,229,848	—	4	—	—
Orleans to Tours	72	72	600,000	32	6	2993	2134
Paris and Orleans	82	82	2,011,720	30⅝	8⅛	—	—
Paris and Rouen	85	85	2,082,916	21	5	7770	5750
Rouen and Havre	59⅛	—	2,272,176	10	—	3153	2427
Strasburgh and Basle (monthly)	88	88	—	6	—	—	—
West Flanders (ditto)	—	—	—	1⅛	—	—	—

* Per cent.—† Interest.—Total for last week, £263,548, being an increase of £31,700 over last year.

ROYAL COLLEGE OF CHEMISTRY,
OXFORD-STREET, LONDON.

The PRACTICAL COURSE OF INSTRUCTION in this INSTITUTION is under the direction of Dr. A. W. HOFMANN and assistants.

The NEXT SESSION will COMMENCE on MONDAY, the 1st of October next, and end on Saturday, the 23d of February, 1850.

The FEE for students working every day during the session, is..... £15 0 0
" " " four days in the week, is..... 12 0 0
" " " three days in the week, is..... 10 0 0
" " " two days in the week, is..... 7 0 0
" " " one day in the week, is..... 5 0 0

Hours of Attendance from Nine to Five.

Further particulars may be obtained on application to
WILLIAM JOHNSON, Secretary.

TO COAL MERCHANTS, OR PROPRIETORS OF COAL BEDS IN WALES.—Any PERSONS willing to SUPPLY not less than ONE THOUSAND TONS per annum of the best NEWPORT, or any other superior FAMILY COALS, may hear of Agents having a good connection, who are desirous of negotiating with parties on terms of mutual advantage. Letters, addressed "X. Y. Z.," Post-office, Truro, will receive immediate attention.

VIVIAN'S PATENT MACHINE, FOR DRESSING ORES OF GOLD, TIN, COPPER, LEAD, AND OTHER PULVERISED ORES.—Mr. THOMAS BOUNDY, of 13, Somerset-place, SWANSEA, begs to inform the proprietors of foreign and other mines, that he has been appointed AGENT for the SALE of those MACHINES—a model of which may be inspected at his residence, and every information given as to their utility. This being the shipping port for most of the foreign and Irish mines, proprietors will do well to purchase here, as, by so doing, they will evade all risk of breakage consequent on transhipping.

PATENT TOUGHENED CAST-IRON.—Messrs. GARDEN and MACANDREW beg to call the attention of Architects, Builders, Engineers, Ironfounders, &c., to the ABOVE DESCRIPTION OF IRON (Mr. Morries Stirling's Patent), which, after numerous trials, experimental and practical, is found greatly to exceed all other cast-iron in tensile and transverse strength, as well as in resistance to crushing forces. Several of the most extensive ironmasters have been licensed, and from them, or their brokers, the patent iron can be procured.

Messrs. GARDEN & MACANDREW have always a STOCK of this IRON in PIGS, and are ready to EXECUTE ORDERS to ANY EXTENT, on the shortest notice.
27, Queen-street, Cheapside, August 10, 1849.

LATEST CURRENT PRICES OF METALS.

LONDON, AUGUST 17, 1849.

ENGLISH IRON. *a* *per ton.*

Bar, bolt, & square, London	£6 0 0
Nail rods	7 0 0
Hoops	7 15 0—8
Sheets (singles)	8 15 0—9
Bars, at Cardiff & Newport	5 5 0
Refined metal, Wales*	3 10 0—15
Do. anthracite*	3 15 0
Pigs in Wales	3 5 0—4
Do. do. forge	2 15—3 0
Do., No. 1, Clyde ....*net cash*	2 5 6-2 7 6
Blewitt's Patent Refined Iron for bars, rails, &c., free on board at Newport*	3 15 0
Do., do., for tin-plates, boiler plates, &c., ditto	4 10 0
Stirling's Patent Toughened Pigs in Glasgow	2 15—2 17
Toughened Pigs in Wales	3 15—4 10
Staffordshire bars, at the works	6 0—6 10
Pigs, in Staffordshire	2 15—3 0
Rails	5 0 0
Chairs	4 0 0

FOREIGN IRON. *b*

Swedish	11 10 0—12
CCND	—
PSI	—
Gourieff	—
Archangel	—

FOREIGN STEEL. *c*

Swedish Keg	13 15 0—14
Ditto faggot	15 0 0

ENGLISH COPPER. *d*

Sheets, sheathing, & bolts, *p. lb.*	0 0 9
Tough cake *per ton*	79 10 0
Tile	£78 10 0
Old copper *e* *per lb.*	7¼d

FOREIGN COPPER. *f*

South American, in bond	—

ENGLISH LEAD. *g*

Pig *per ton*	15 15 0
Sheet	16 15 0
Red lead	18 0 0
White ditto	22 0 0
Patent shot	19 15 0

FOREIGN LEAD. *h*

Spanish, in bond	15 0—15 5
American ditto	—

ENGLISH TIN. *i*

Block *per cwt.*	3 13 0
Bar	3 14 0
Refined	3 19 0

FOREIGN TIN *k*

Banca, in bond	3 12 0
Straits	3 10 0
Peruvian (6 mo 2½ p. ct. dis.)	—

TIN-PLATES. *l*

IC Coke *per box*	1 7 0
IC Charcoal	1 11 0
IX ditto	1 17 0

SPELTER. *m*

Plates, warehoused *per ton*	14 12 6-14 15
Ditto, to arrive	—

ZINC. *n*

English sheet *per ton*	22 0 0

QUICKSILVER *o* *per lb.* 0 3 0

Terms.—*a*, 6 months, or 2½ per cent. dis.; *b*, ditto; *c*, ditto; *d*, 6 months, or 3 per cent. dis; *e*, 6 months, or 2½ per cent. dis.; *f*, ditto; *g*, ditto; *h*, ditto; *i*, ditto; *k*, net cash; *l*, 6 months, or 3 p. ct. dis.; *m*, net cash; *n*, 3 months, or 1½ p. c. dis.; *o*, ditto, 1½ dis.
* Cold-blast, free on board in Wales.

REMARKS.—The general improvement in the iron trade, noticed in our last, has been fully born out this week, and makers are very firm at our quotations. Letters received from the continent during the last few days are much more encouraging, and hold out the expectation of an early revival of trade. A few sales of Welsh bars have taken place at 5*l.* 5s., and some of the makers are now asking 5*l.* 10s. at the port. Scotch pig-iron must be quoted about the same—say, 45s. 6d. to 46s. for mixed Nos., at which the market closes firm.

LIVERPOOL, AUGUST 17.—We have to report continued activity in our market, and the advanced prices firmly maintained. Few of the makers of common bar in Wales are selling under 5*l.* 5s., and orders are plentiful. Staffordshire makers are well off for orders, and an advance is not improbable. No change to notice in pig-iron; if any, the market closes a shade in favour of buyers. Tin-plates are in active demand, and the prices must be quoted 27s. for coke, and 31s. for charcoal.

GLASGOW, AUG. 16.—The pig-iron market has been remarkably dull during this week, and the business has been confined to small parcels to consumers. The price of mixed Nos. may be quoted at 45s. 6d., cash.

CURRENT PRICE OF GOLD AND SILVER.

Foreign gold, in bars	per oz. £3 17 9	New dollars	per oz. £0 4 10½
" Portugal pieces	0 0 0	Silver in bars (standard)	0 4 11⅛

LEAD ORES.

Sold in London.

Mines.	*Tons.*	*Price.*	*Purchasers.*
Cwm Erfin	12	£11 8 0	Newton, Keates, & Co.
Tamar Mines	92	19 9 6	T. Somers.
Sold at the Mine.			
East Wheal Rose	39	£14 15 0	R. Michell & Son.
ditto	11	14 12 6	J. T. Treffry.
ditto	8	8 8 6	Tamar Company.
Wheal Penhale	32	10 2 0	Sims and Co.
Trehane	59	21 17 6	Pontifex & Co.
ditto	72	12 3 0	Walker, Parker, & Co.

COPPER ORES.

NO SALE on Thursday last, August 16.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—Devon Great Consols, Wheal Joslah, Wheal Maria, Wheal Fanny, and Wheal Anna Maria, 1216—Fowey Consols 338—West Caradon 325—Marke Valley 246—Wheal Henry 240—Wh. Friendship 139—Bedford United Mines 119—West Fowey Consols 100—Holmbush 76—Wheal Busy 58—

NOTICES TO CORRESPONDENTS.

*** We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

In noticing the patent taken out for Improvements in the Application and Combination of Mineral and Vegetable Products, in our last week's Number, the name of Thomas John Knowlys, of Heysham Tower, near Lancaster, and not J. Knowlys, should have been given.

"X. Y. Z."—Our correspondent must be aware, that we cannot allow the columns of the Journal to be rendered the means of puffing a mine on the authority of "A Mining Surveyor in Broad-street," whose name, as well as that of the mine, is withheld. We recognise the propriety he has observed in giving his own name.

Mr. Shepherd's letter on Hungary shall appear next week.

"L. T." (Harrow-on-the Hill).—The early history of chemistry is involved in darkness; the writings of the alchemists carry it up to the most remote antiquity, though nothing has been said satisfactory as to the origin of their craft. Borrichus, and later authors, who felt that many of the processes of the artificers were dependent upon chemical agencies, thence inferred that they were the result of chemical knowledge. On these grounds, Tubal Cain, the first artificer in iron and brass, has been considered the father of metallurgical chemistry. There is also a story in Vossius, which was believed by Tertullian, that the knowledge of chemical principles was among the gifts bestowed by the angels who were led from heaven by the beauty of the daughters of the earth. Others, more moderate, deem Noah the first chemist, because he is said to have discovered the art of making wine. Du Fresnoy, in his *Historie de la Philosoph. Herm.*, says that it was bequeathed to Ham and his descendents as a heritage.

"G. C. B." (Lynn).—When decomposition is effected on the large scale, the quantity of gas is found to vary with the quality of the coal, and the manner in which the operation is conducted. According to Mr. Peckstone, a chaldron of Newcastle Wall's-End coal yields 10,000 cubic feet, being at the rate of 370½ cubic feet per cwt. At Edinburgh, a cwt. of Cannel coal yields 430 feet, and a similar return from coal of the same species is obtained at Glasgow, and other towns in Scotland.

"A Manufacturer" (Newcastle-on-Tyne) —The origin of the manufacture of glass is involved in much obscurity. The art was well known to the Egyptians. A passage in Pliny attributes the discovery of glass to accident. A merchant vessel, laden with nitre, or fossil alkali, was driven ashore on the coast of Palestine, near the mouth of the River Belus, a small stream running from the foot of Mount Carmel, in Galilee, into the Mediterranean. The mariners, unable to procure stones to rest their cooking vessels upon, used pieces of their cargo instead. The fire reduced the alkali to a soft state, and incorporating with the river sand, it melted down into a vitreous stream. This circumstance was communicated to the inhabitants of the district, who availed themselves of the hint, and engaged in the manufacture of glass. Strabo and Josephus both state that the sand for about half a mile round the mouth of the River Belus was peculiarly adapted to the manufacture of glass, and it was much used in the glass-houses of Tyre and Sidon. The first account we have of the manufacture of glass in England, dates from the year 1439, at which period the Countess of Warwick contracted with John Prudde, of Westminster, to erect a magnificent tomb for the earl, her husband. John Prudde is thereby bound to use "no glass of England, but glass from beyond seas," which stipulation, besides showing that the art of making window glass was known and practised in England, likewise indicates that it was inferior to what could be obtained from abroad. The finer sort of window glass was made at Crutchedfriars, London, in 1557. Flint-glass was first manufactured in England at the Savoy House, in the Strand, and the plate glass, for looking-glasses, coach windows, and similar purposes, was made at Lambeth, by Venetian workmen, brought over in 1670 by the Duke of Buckingham. The art of glass making was introduced into Scotland in the reign of James VI. An exclusive right to manufacture it within the kingdom for the space of 31 years, was granted to Lord George Hay, in the year 1610. This right was transferred, in 1637, for a considerable sum to Thomas Robinson, merchant tailor, in London, who again disposed of it, for 250*l.*, to Sir Robert Mansell, Vice-Admiral of England. The first manufactory of glass in Scotland was established at Wemyss, in Fife.

A. Brandsen (Drammen).—The railway chair invented by Mr. Robt. Stephenson is somewhat similar in form to the common ones in use; in this invention the rail is confined by two bolts, having angular ends, which enter a small score in the rail, and are keyed home by iron keys, with split ends; the keyhole in the chair, and that in the bolts being so proportioned, that the effect of keying up is to press the end of the bolt against the rail. In these chairs there is a moveable piece of iron, the bottom of which is circular and the top flat, laid in a properly-formed receptacle in the bottom of the chair, and on this the rails rest, so as to give perfect ease to any motion produced by flexure.

George Grey (Sunderland).—Coal is found in very inconsiderable quantities in European Russia; there is a small mine worked at Tula, another at Bakhmout, in the government of Ikaterinoslav, but neither seem to be of much utility. In Southern Poland and Cracow there are numerous beds of black bituminous coal, resembling that of Great Britain, some of which are 30 feet in thickness; these occur in the secondary formation. In the tertiary districts, deposits of brown coal are met with, which also yields amber, the exudation of a dicotyledonous tree.

"A Student" (King's College).—Scheele (the celebrated chemist) was a Pomeranian by birth; he died at Koping, in Sweden, the 21st of May, 1786, in the 44th year of his age. The preparation called Scheele's Prussic Acid derives its denomination from him.

"G. S. L." (Brighton).—Perchloride of tin was discovered by Libavius in the sixteenth century, and was on that account called "Fuming Liquor of Libavius." It is formed with 6 parts of tin, 1 part of mercury, and 33 parts of corrosive sublimate, mixed together, and distilled by a moderate heat. It is a colourless liquid, like water. When exposed to the air it smokes violently, on account of its great avidity for moisture: 1 part of water, and 3 of the liquid, when mixed, constitute a solid mass. Hence the reason why crystals appear round the cork when fuming liquid is kept in a phial shut with a common cork. It acts with great violence on oil of turpentine. It usually contains an excess of chlorine. When pure, it should be a compound of 1 atom tin=7·25; 2 atoms of chlore=9.—Total, 16·25.

"Geographicus" (Islington).—The secondary range of the Andes, situated on the eastern side of the Cordillera, is called the Uspallata Range; in it are situated the silver mines of Uspallata and Famatina, and the alum mine of Guandacol—they are situated in the territory of the Argentine Republic.

James Edmond (Newtown).—The most recent work on horology is *Dent on the Construction of Watches and Clocks*, published by the author, Cockspur-street.

"J. L."—In reference to the letter of our correspondent, "I. T. C.," we find he has been incorrect, that a different and more exorbitant scale of charges are used on Sunday on the Richmond Railway. What "I. T. C." principally cited was, that the Greenwich line runs third-class trains simultaneously with the first and second-class carriages, and that the same liberality to the public should be shown by the Richmond Railway, which must be considered a pleasure line. On the Sunday in question, at 10 o'clock at night, there were no third-class trains, and the public was forced to be crammed in close second-class carriages, or find their way to town the best way they could. "I. T. C." states the general impression was, there were third-class carriages with every train, and great dissatisfaction was expressed when such was found not to be the case. We by no means, as "J. L." would infer, wish to follow the fashion of abusing railways; but we think directors would better serve their own interests if they consulted a little more the convenience and comfort of the public.

"A Constant Reader" (Oxford).—Crichtonite occurs in small crystals, in the form of acute rhomboids, having the summits replaced, and being otherwise variously modified by secondary planes; the only cleavage is at right angles to the axis of the rhomboid. The colour is bluish black, opake, and of a brilliant metallic lustre; the cross fracture conchoidal and shining—streak deep black. It is infusible before the blowpipe, but with salt of phosphorous affords a glass, which becomes red on cooling. It does not affect the magnet. Crichtonite is classed by Berzelius with menaccanite. It occurs accompanying anatase and on rock crystal, at St. Christophe, near Oisans, in Dauphiné.

"G. F. M." (Bath).—Professor Faraday and several eminent chemists have admitted the possibility of *perpetual motion*. To produce this phenomenon, two metals and a liquid are required, whose elements do not combine with either of them. The self-reverting current constantly excited by these metals may, by means of electro-magnetic arrangements, be made to give motion to machinery, without being weakened, and ultimately destroyed, by this expenditure of force. At the same time it, perhaps, decomposes the liquid—water, for example; and, in order that this liquid may not require renewal, the detonating gas given off may be collected in a vessel containing spongy platinum, where it will recombine, and form water, and in that state may flow back again to the metals, and by this means we have the *perpetual motion* complete.

Edward Jones (Cardigan).—Guyton Morvean supposes the red colour of fruits to be owing to the reaction of their own acid on the colouring matter, and that tin in restoring the colour of violets, attracts from it the acid which had turned it red; lead, bismuth, zinc, antimony, and particularly iron, doing the same. The metallic oxides are not equally powerful, but the oxide of tungsten, he thinks, is superior to all others in forming cakes for painters.

L. Bruce (Montreal).—Copper ores containing a quantity of iron pyrites may be advantageously smelted by the admixture of a small quantity of quartzose matter—the quartz having an affinity to the iron, forms a silicate of iron. It may, perhaps, be prudent to skim the furnace before the charge is quite ready. The flowing tap should not be used, if it is possible to be avoided, as clean slags are very rarely obtained from it.

J. Carey (Alten).—The portable laboratory of Plattner, with tests, re-agents, and the whole apparatus complete, can be obtained by writing to the *Berg Mechanicus*, at Freyberg. Its cost can be reimbursed by a draft on Hamburgh.

"L. B." (Greenwich).—The average of 12 trips, of 24¾ miles, up 1 in 440, on the Grand Junction Railway, with six engines—three made by Robert Stephenson and Co., and three by Sharpe, Roberts, and Co.—was 23¾ miles per hour, with a weight of 58 tons. The coke consumed was 864 lbs., and the steam power 48 lbs. per square inch. The engine No. 7, on the London and Birmingham line, built by Mr. Bury, of Liverpool, went 10 miles in 10 minutes, on the 3d October, 1838, with only one cylinder working—viz.: from Hampton to Birmingham, being 4½ miles, up 1 in 660, 3½ miles in 1370; rest of the the way was level, and the time included the getting up and slacking down the speed.

H. Crosbie (Queen-street).—There are several auriferous lodes in Spain. A mine, called Domingo Florès, situate at Medal, in the kingdom of Leon, was worked, by royal concession, from May 11, 1639, to June 26, 1644, and afterwards from 1733 to 1749, at which period it was abandoned, in consequence of the interdiction issued by the Government to stop the working of mines in Spain, in order to direct the attention of the metallurgists to those of America.

J. Lawrence (Cromford).—There are several mines of lead in France, the most considerable are those of Pouilasouen and Huelgoet, in the department of Finisterre, which have been worked into two parallel veins, included in primitive rocks. There are also deposits of lead in the Vosges, where the galena is disseminated in a thick vein of decomposed granite, in the department of Sambre and Meuse, where the veins traverse limestone nearly in a vertical position, and in other places where, in their distributions and productions, the mines are analagous to those of Great Britain. The produce of the French mines is about 30,000 quintals of lead annually.

"Chemicus" (Liverpool).—Vanadium was discovered during the year 1830, by M. Sefstrom, in a Swedish iron, remarkable for its ductility. It is the produce of the iron mine at Taberg, not far from *Jönköping*. It exists also in an ore of lead which occurs at Zimipan, in Mexico, which was analysed, in 1801, by Del Rio, who stated that it contained a new metal, which he denominated erythronium. It was subsequently found that that the new metal was chromium. M. Sefstrom extracted vanadium from the scoriæ of the Taberg iron, which he found richer in that metal than the iron itself.

H. Salamons (Russel-street).—The earliest application of gas light on a large systematic scale was made at Manchester, where an apparatus for lighting the great cotton mills of Messrs. Philips and Lee was fitted up in the years 1804 and 1805, under the direction of Mr. Murdoch. A quantity of light nearly equal to 3000 candles was produced on this occasion.

"G. M." (Clerkenwell).—The earliest clock with a balance of which we have any distinct account, was made by Henry de Wyck, or de Vick, a German artist, for Charles V., king of France, and set up in the tower of his palace, about the year 1364.

Several communications must necessarily stand over till next week, amongst others the letter of "X. Y. Z." (Canterbury)—articles on the Employment of Slaves in Mines "W. B. R." (Birmingham)—"W. H." (Birmingham) Britannia Bridge—on the Sewage of London, by Matthias Dunn, M.E.—and the Statistics of Lead Mines.

*** The numerous disappointments in procuring back Numbers during the past year induces us to suggest, that subscribers should be careful in filing, or otherwise preserving, their papers; and where extra copies are required, that they should be applied for as early as possible.

*** We should feel obliged to all pursers, captains, or adventurers, to forward particulars of meetings, &c., of the mines with which they may be connected, on the earliest opportunity, that they may be published in the Journal.

*** It is particularly requested that all communications may be addressed—
To the Editor,
Mining Journal Office,
26, Fleet-street, London.
And Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, AUGUST 18, 1849.

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

In our Number of the 28th July, we furnished a statement of the sales of copper ores at Swansea, in the quarter ending at Midsummer last, so far analytically, as to separate the Irish and Welsh ores from those of foreign origin. We now extend our analysis of the foreign ores to the distinction of the produce of different countries, and, so far as any means are afforded by the published lists, to the sales of the importations of particular companies engaged in that business.

Results of the Sales, by Public Ticketings, at Swansea, of Copper Ores, the produce of the Island of Cuba, in the quarter ending 30th June, 1849:—

Date of Sale.	Tons of Ore.	Average Produce.	Computed Quantity of Fine Copper.	Average Prices of Ores.	Amount of Sales.	Val. of ore to produce 1 ton of Copper.
COBRE ORES.	21*cwts.*	*Per Cent.*	*Tons Cw.*	£ s. d.	£ s. d.	£ s. d.
Sold April 5	506	15·753	79 14	12 4 3	6,179 14 6	——
„ „ 12	1035	13·682	141 12	10 15 7	11,155 8 0	——
„ „ 26	1130	18·838	212 17	15 3 6	17,148 7 0	——
„ May 10	932	15·236	142 1	11 15 11	10,993 3 6	——
„ „ 24	733	16·341	119 16	11 15 8	8,638 10 0	——
„ June 7	669	20·813	139 5	12 18 0	8,629 11 6	——
„ „ 21	1091	13·783	150 8	8 18 9	9,749 17 0	——
Totals and Averages	6096	16·168	985 13	11 17 10	72,494 11 6	73 11 0
CUBA ORES.						
Sold April 5	396	14·608	57 17	11 11 3	4,578 15 6	——
„ June 21	416	17·741	73 16	11 13 11	4,865 13 0	——
Totals and Averages	812	16·213	131 13	11 12 7	9,444 8 6	71 14 9
SANTIAGO.						
Sold April 12	353	19·642	69 7	15 17 3	5,602 12 0	80 15 9
HAVANA.						
Sold April 5	39	17·410	6 16	13 17 11	541 19 6	79 14 1
Totals & Averages of all sorts, from the Island of Cuba, for quar.	7300	16·348	1193 9	12 1 4	88,083 11 6	73 16 1

CHILI.

CHILI ORES.	21*cwts.*	*Per Cent.*	*Tons Cw.*	£ s. d.	£. s. d.	£. s. d.
Sold April 5	52	27·250	14 3	21 18 6	1140 2 0	——
„ „ 12	48	27·750	13 6	22 2 6	1062 0 0	——
„ „ 26	45	27·625	12 9	22 14 6	1022 12 6	——
„ May 10	48	28·750	13 16	22 17 6	1098 0 0	——
„ „ 24	8	44·500	3 11	31 5 0	250 0 0	——
Totals & Averages from the State of Chili, for the quarter	201	28·482	57 5	22 15 0	4572 14 6	79 17 5

AUSTRALIA.

BURRA BURRA.	21*cwts.*	*Per Cent.*	*Tons cwt.*	£ s. d.	£ s. d.	£ s. d.
Sold April 26	347	31·357	108 16	26 0 2	9,025 2 0	
„ May 10	25	30·960	7 15	24 7 8	609 12 6	
„ „ 24	1286	29·672	381 12	21 8 10	27,572 5 6	
„ June 7	1002	30·031	309 18	20 4 9	20,278 0 0	
„ „ 21	1554	28·683	445 15	19 17 7	30,892 2 0	
Totals and averages	4214	29·539	1244 16	20 19 5	88,377 2 0	70 19 11
GIBURRA.						
Sold April 5	80	12·600	10 2	9 14 5	777 12 6	
„ „ 12	71	13·000	9 5	10 14 6	761 9 6	
Totals and averages	151	12·814	19 7	10 3 10	1,539 2 0	79 10 10
KAPUNDA.						
Sold April 12	64	22·148	14 4	18 2 3	1,159 5 0	81 12 9
Totals & averages of all sorts from colony of Australia for quar.	4429	28·863	1278 7	20 11 3	91,075 9 0	71 4 11

FRANCE.

FRENCH SLAG, sold June 7.—Ore, 27 tons (21-cwts.)—Average produce, 4·875—Fine copper, 1 ton 6 cwts.—Average price, £2 2s.—Amount of sales, £56 14s.—Value of ore to produce 1 ton of copper, £43 12s. 4d.

Summary of the foregoing results, and comparative statement of the Sales of English Ores, by Public Ticketings, in Cornwall, and of Irish and Welsh Ores, also by Public Ticketings, in Swansea, for the quarter ending 30th June, 1849:—

	Tons of Ore.	Average Produce.	Computed Quantity of Fine Copper.	Average Price of Ore.	Amount of Sales.	Val. of ore to produce 1 ton of Copper.
	21*cwts.*	*Per Cent.*	*Tons Cw.*	£. s. d.	£ s. d.	£ s. d.
CUBA	7300	16·348	1193 9	12 1 4	88,083 11 6	73 16 1
CHILI.....	201	28·482	57 5	22 15 0	4,572 14 6	79 17 5
AUSTRALIA	4429	28·863	1278 7	20 11 3	91,075 9 0	71 4 11
FRANCE	27	4·875	1 6	2 2 0	56 14 0	43 12 4
Totals & averages of all foreign ores for the quarter ..	11,957	21·162	2530 7	15 7 5	183,788 9 0	72 12 8
Cornish ticketings for the quarter	36,631	7·935	2906 14	5 2 2	187,167 15 6	64 7 10
Irish and Welsh, sold at Swansea	2,968	9·607	285 3	6 18 10	20,607 19 6	72 5 5
Totals & averages of British ores for the quarter	39,599	8·060	3191 17	5 4 11	207,775 15 0	65 1 11
Excess of British ores above Foreign, for quar.	27,642	—	661 10	——	23,987 6 0	——
Excess of Foreign ores above British for the quarter ..	—	13·102	——	10 2 6	——	7 10 9

We have already shown that, in all respects, except the per centage of produce—which was a trifle below that of the quarter ending at Christmas last—the aggregate quantities of ore and fine copper, as well as the price, and, necessarily, the amount of sales, of the Midsummer quarter, were all in excess over the previous period.

Looking to the state of the business of the several countries, we are induced to place the various points of comparison in distinct columns for the two quarters, as affording a clear and simple view of every fluctuation in quantity or value:—

Thus the importations from the Island of Cuba show—	Quarter ending June 30, 1849.	Quarter ending Dec. 31, 1848.
The quantity of ore (21 cwts.)	7,300	6,858
The average produce (per cent.)	16·348	15·862
The computed quantity of fine copper (in tons)	1,193	1,087
The average price per ton of ore	£ 12 1 4	£ 10 0 8
The amount of sales	88,083 0 0	68,732 0 0
The value of ore to produce 1 ton of copper	73 16 1	63 3 8
From Chili—		
The quantity of ore (21 cwts.)	201	2,144
The average produce (per cent.)	28·482	36·325
The computed quantity of fine copper (in tons)	57	778
The average price per ton of ore	£ 22 15 0	£ 23 14 4
The amount of sales	4,572 0 0	50,524 0 0
The value of ore to produce 1 ton of copper	79 17 5	64 17 6
From Australia—		
The quantity of ore (21 cwts.)	4,429	1,461
The average produce (per cent.)	28·863	28·710
The computed quantity of fine copper (in tons)	1,278	417
The average price per ton of ore	£ 20 11 3	£ 19 15 11
The amount of sales	91,075 0 0	28,923 0 0
The value of ore to produce 1 ton of copper	71 4 11	69 5 8

This view of the trade of the two periods presents some extraordinary facts for notice. In the case of the island of Cuba, the quantities do not greatly exceed those of the Christmas quarter; but the prices being fully 20 per cent. above those of that period, the money value has gone up nearly 20,000*l.* in the last half-year; a fact which has recently manifested itself in the affairs of the principal company connected with that island, in the agreeable shape, to the shareholders, of a very handsome dividend.

A very different state of things presents itself in the case of Chili. It will be seen that the sales of the last quarter are not quite a tenth part in quantity or value of the sales in the Christmas quarter. But the falling off in the quantity of ore from that country, has been abundantly compensated by the importation of bricks, pigs, and ingots, or, in Custom-House language, of "unwrought" and "part wrought" copper. We have not before us, at the moment of writing, the exact returns of the Christmas quarter; but a comparative view of the trade of the half-year that has just terminated, and the corresponding period of 1848, will suffice to establish the fact of large increase. There was entered for consumption in the half-year ending at Midsummer, 1848, of "unwrought" and "part wrought" foreign copper, 175 tons; and in the corresponding six months of this year, 1022 tons—being an increase, within the present year, of 847 tons, or at the rate of 1700 tons of copper per annum. This quantity, with a trifling exception, has found its way from Chili. The only comment we should be disposed to make upon this fact, would be in the shape of a question to the English smelter—How has such a change in the trade been brought about?

The only other material question to be noticed in the above statement relates to Australia. The quantity and value of ores received from that colony, in the last quarter, are respectively more than treble those of the quarter ending at Christmas; the quantity being nearly 3000 tons more, and the money value above 62,000*l.* higher, than the former period. In fact, the value of Australian ores imported in the last quarter, is within a trifle of half the amount of the entire Cornish sales; and the united sales, within that period, of two companies only, importers of foreign ores—the Burra Burra, in Australia, and the Cobre, in Cuba—have amounted to 160,871*l.*, or within a very few thousand pounds of four-fifths of the entire sales of ores raised in the British islands. Nor do the figures here exhibited show the entire value of Australian ores imported, since we know that certain cargoes, imported from that colony, pass into the hands of the smelters by private contract, which are so much clear addition to the quantities and value here given, representing, as they do, only what is sold at the public ticketings.

Such are the results of an examination into the details of the copper trade for the two quarters referred to; and without further comment at present, we leave the facts for the consideration of our readers; to various classes of whom they cannot fail to be matter of considerable interest.

How oft have we directed the attention of Government and the authorities, as well as invited that of the colliery owner, to the sad and melancholy accidents to which our columns from week to week give publicity; yet what have been the results? Certainly nothing on which we can congratulate ourselves or the mining community. Another fearful accident has taken place, which will be found recorded in our pages of the present week, and yet the farce of commissions of inquiry is the only hope to which we have to look forward. The supineness of the Minister, the absence of active philanthropy, or even the common feelings of humanity on the part of the colliery proprietor, and the want of union or energy on the part of the working collier and miner, leave things as they were; while the old adage, that the business of all is considered to be that of none, is too apparent as affects "accidents in mines."

We this week have again to record the loss of 52 lives, arising from one of those fearful accidents which have of late been so frequent—the effects of fire-damp, arising, possibly, from the inadvertence, or negligence, of the collier; but we would ask, are not the masters and agents equally, if not more culpable? We contend they are; and until some legislative enactment, whereby penalties are inflicted, and a provision made for the families of those whose lives are thus sacrificed, no good will ever accrue. The *Times*, in adverting to the case under notice, that of the explosion at the Llett Shenkin Colliery, at Aberdare, near to Merthyr Tydvil, observes—"As long as England remains England, the interests, the passions, even the follies, of seafaring men will command respect, or at least regard. Let his other occupation be what it will, every Englishman is at heart a sailor. But it is not only the sea that segregates a certain portion of the population from the bulk of their fellows—there is another section of our countrymen of whom we think less frequently, and whose life is painfully spent beneath the surface of the earth in mines and collieries, at a depth which the sun has never reached, hot with internal fire, and poisoned with pestilential vapours."

It will be remembered that, in the debate on Mr. T. Duncombe's bill, in the House of Commons, on the 5th July last, that gentleman observed—"The evil is not limited to the number of lives actually sacrificed, large as that loss really is—amounting, I believe, to no less than 5000 in the course of the last two years—it extends itself to the widows and children who are left behind them without support"—and we believe he was even under the mark. At the Darley Main Colliery, in the month of February last, no less than 81 souls were sacrificed, two accidents having previously taken place, and one reported in our columns so late as the 28th July, although, fortunately, no lives were on that occasion lost; and in the Ardley Main Colliery, distant but two miles from this scene of destruction of life, 73 poor creatures were blown to atoms. At the Moat Colliery, Dudley, 14 others fell victims. But it is unnecessary to cite the numerous instances which have occurred within the past few months; while, on referring to the proceedings in the House, which will be found in our columns of the 7th July, it appears that Mr. Lacy, a gentleman doubtless well informed, or otherwise should not have advanced an opinion, opposed the measure of the introduction of a bill which had for its sole object the security and preservation of the life of the collier, observing that in 99 cases out of every 100 the accidents which occurred arose entirely from the fault of the parties themselves. He believed that legislation would produce mischief rather than good, and moved that the bill be read that day three months.

Mr. M'Gregor having seconded the amendment, the Earl of

LINCOLN *humanely* came forward to express his opinion that, from the evidence afforded by the owners of collieries, any measure similar to that contemplated was in the first instance impracticable; but, even were it practicable, it would be very mischievous. Mr. BAILEY, Mr. BRIGHT, and Sir GEORGE GREY were also opposed to the measure. So much for legislative wisdom and humanity. We have before observed, that without the public voice be raised, nothing can be expected to be done. We trust the LORD MAYOR will, on his return to town, convene a public meeting, and endeavour, by the expression of public opinion, to enforce some measures being resorted to, which shall at once secure to the widow and orphan support in cases of accident, and at the same time render those who benefit from the labour of the working collier, in some degree responsible for the safety of his life.

In conclusion, we have only to remark that, were the application of the inventions of Mr. FOURDRINIER and Mr. GOLDSWORTHY GURNEY, which have been oft treated on in our columns, rendered imperative, and that a proper check was enforced, as regards the safety of the machinery employed, as well as a corrective on the use of the safety-lamp, which should in all instances be secured, and a penalty attend the removal of the guaze or protection, we should hear less of accidents—but the real and only safeguard is to inflict a penalty on the proprietors, or their agents, for not seeing that the necessary precautions are observed; and, moreover, that the former be compelled to provide for the widow and fatherless.

We should be considered unmindful of our position as a public journalist, were we to allow the proceedings at the adjourned meeting of CAMERON'S STEAM COAL COMPANY to pass by without remark. It is only natural to be supposed, that we are anxious to uphold all companies formed for working mines, or collieries, tending, as their products do, to the national wealth, as developing the mineral treasures from their hidden depths, and affording employment to the countless thousands who are dependent on them for existence. It is, then, much against our inclination, when we make reference to the proceedings of any company, whose operations, whether underground or at surface, call for animadversion.

In the present instance, we regret to say that the grounds afforded are such as to leave us no alternative, as the accounts presented to the adjourned half-yearly meeting—an abstract of which will be found, with the report of the proceedings at the meeting—too clearly prove the error into which too many companies have fallen from want of proper management, or having invested their capital without exercising a proper degree of caution.

We are not prepared to state that money has been misapplied in the present instance; but this we will say, never was a concern carried on with greater want of judgment or practical knowledge. Legal acquirements are well in their way; but however fitting the solicitor of the company, or a knowledge possessed by the secretary, it is not for the one or other to become dictator, or to allow, in the absence of the solicitor's bills, proceedings to be taken without first obtaining the assent of the body of shareholders, or compromises made, moneys secured and applied—while neither law nor equity can support or maintain the position, or authority, assumed by the respective parties, or the remnant of the board, who presume to act. We shall this week content ourselves with a brief *resumé* of the proceedings; and it may indeed be sufficient if we confine ourselves to the accounts submitted, but *not* received, or approved. The subscribed capital is set down at 137,485*l.*; there is due to creditors, 21,779*l.* 11*s.* 5*d.*; bonds, on account of purchase money, 5000*l.*; and a balance of 37,772*l.* 16*s.* to the vendors, which latter sum is, however, chargeable only on the profits—thus we have a total of 202,037*l.* 7*s.* 9*s.*

On the other side, the value of the office furniture, with cash in hand, is about 1000*l.*, the balance being represented by the value of the property, wharf, and permanent works, a balance of 37,232*l.* 9*s.* 8*d.* being carried to debit of profit and loss. This account in itself is worth dissection, and as it is given at length in another column, we deem it unnecessary to offer more than a passing comment. But the colliery working account we do think requires an explanation, if that we read the figures aright. In the first place, we find that on the 30th of June, 1848, there was "stock in hand," amounting to 4676*l.* 19*s.* 1*d.*; while the sales up to 30th of June, 1849, produced only 2156*l.* 16*s.* 9½*d.*—thus leaving, as might naturally be concluded, a balance, or stock, in hand, of 2520*l.* 2*s.* 3½*d.*, to which it is only natural to be supposed, should be added the produce arising from the expenditure (exclusive of 2000*l.* for royalty) of 3705*l.* 14*s.* 9*d.* during the past 12 months; the sum of no less than 1460*l.* 19*s.* 7¾*d.*, being for "horse keep and stable expenses." Allowing that a loss of 50 per cent. has taken place on the value of the quantity of coal raised, we should then require a stock equal to 4300*l.* and upwards, but which, we believe, remains still in the recesses or bowels of the earth.

It was only on the eve of going to press that we received a copy of the report of the committee of investigation of the Midland Railway Company, to which we have briefly referred in another column; but its importance demands more than a casual notice. We cannot on the present occasion give even a digest or abstract of the report presented, or rather that of the accountants, which is embodied, and who appear to have dissected the accounts with much care and discretion, while the observations made on the absence of vouchers, and the loose system observed, are highly commendable.

As an instance, we may state that, of the payments made for engineering and surveying—no slight item in the accounts—it is stated that "for at least three-fourths of this sum, no accounts, as far as we have been able to ascertain, have been rendered to the company." The committee, in closing their report, observe, "it will be seen that, if the corrections of the capital and revenue accounts, as suggested by the accountants be laid aside, it will require some 2,500,000*l.* more capital to finish all the works for which Acts have been obtained, than the company have present power to raise;" and the report continues, "if, on the other hand, the company stop short on the completion of the works in hand, there will be a surplus of available capital of about 2,000,000*l.*, which may be applied in the discharge of *so much debt*. It appears from the half-yearly statements, made up to 31st December last, there existed an excess of expenditure over receipts on capital account of 461,404*l.* 3*s.* 6*d.*, and a surplus on revenue account of 202,349*l.* 19*s.* available for a dividend.

VENTILATION OF BUILDINGS.—At a time like the present, when the attention of the faculty and men of science are directed to ventilation in buildings in our densely thronged thoroughfares, from the prevailing epidemic, at the same time that the attention of Government is in like manner employed in the ventilation of our mines, any improvement or suggestion, however simple, is deserving of notice—indeed, the simplicity of the measure introduced is in itself the best recommendation to public favour and support. We would, therefore, direct public attention to a patent which has for its immediate object the admission of air and light at the same time; this is accomplished by a series of narrow perforations made in the glass, which we presume is cast in such a way, that the fresh or cold air is allowed to enter, but in so diffused a manner as to avoid draught, which has been the main objection to any admission of cold air, as driving out at the same time that more rarified. In the present instance the admission may be said to be at once imperceptible, regular, and complete, while the price slightly exceeds that of ordinary glass used for sashes. It would be somewhat difficult to describe it without a diagram; but if we can convey to our readers a plate, or square, of glass of sufficient strength to admit of a series of horizontal apertures, which is placed in the upper portion of the frame, either wholly across or occupy one or more panes, it will then be observed that the cold air entering displaces the heated air, while the temperature, or admission, may be regulated by the ordinary sash. It is only necessary to observe, as to the efficacy and advantages attendant upon the application of this improvement in ventilation, that it has been adopted by the Bank of England, the Custom House, several of the assurance offices, hotels, and public buildings, as well as by private residents in London. The report of Mr. C. R. Cockerell, architect to the Bank of England, is most conclusive, considering it "a very valuable invention for the health of densely occupied offices and apartments," having applied it in his own offices, and which is fully confirmed by the testimony of R. Davison, Esq., C.E., who further adds to its merits as affording a draught to smoky chimneys, without subjecting parties to cold and inconvenience arising from its application.

THE MAKE OF IRON.

We have before us the report of the commissioner (Mr. Seymour Tremenheere), on the mining districts of Northumberland, Durham, Lanarkshire, and other parts of Scotland and Derbyshire, appointed under the provisions of the Act 5 and 6 Vic., c. 99, to inquire into the operation of that Act, and into the state of the population in the mining districts, which bears date July, 1849. On the present occasion we confine ourselves to the statistics, reserving, until a future Number, an abstract of the report itself, which occupies some twenty-two pages, and while it contains much useful information, we cannot help saying is far more diffuse and wordy than would appear to be needful. However, Mr. Tremenheere is a useful man in collating information; he may be said to know his business, and if he would only confine himself to matters of fact, and not indulge in opinions, we think he would better effect the object in view.

NUMBER OF FURNACES AND MAKE OF IRON IN ENGLAND, SCOTLAND, AND WALES, IN THE YEAR 1806.

Name of Works.	Furnaces. In.	Out.	Total.	Make per year.	Owners.
STAFFORDSHIRE.					
Apedale	1	—	1	1400	G. Parker & Co.
Silverdale	1	—	1	1010	R. Sneyd.
Golden Hill	1	—	1	184	Banks and Co.
Level	2	1	3	3351	Gibbons.
Brierley	—	2	2	—	Orrions.
Brierley Hill	1	—	1	817	Orrions.
Park Head	1	—	1	1404	Parker.
Blowers Green	1	—	1	2426	Gravebrook.
Netherton	1	1	2	1800	Atwoods.
Gornal Wood	1	—	1	432	Banks.
Grave Yard	1	1	2	1274	Hawkes and Co.
Dibsdale Bank	1	—	1	300	Dixon.
Deepfield	2	—	2	3660	Stokes.
Bilston	2	1	3	3550	Birkley and Co.
Bradley	2	1	3	2566	J. Wilkinson.
Capon Field	2	—	2	4600	Smith, Read, and Co.
Rough Hill	2	—	2	3000	Fereday and Co.
Mill Field	2	—	2	5000	Fereday and Co.
Gospel Oak	2	—	2	4667	Read.
Toll End	1	1	2	1220	R. Hawkes.
Moorcroft	1	1	2	1955	Addenbrook Estab.
Wednesbury	—	1	1	—	Atwood.
Dudley Port	1	—	1	1196	Parkes.
Oldbury	1	—	1	4500	Barker.
Tipton	2	—	2		Barker.
	32	10	42	50,002	
CUMBERLAND.					
Bearpot or Seaton	1	—	1	670	Barker.
Duddon	1	—	1	325	Mitchell and Co.
Newland	1	—	1	200	Knott and Co.
Backbarrow	1	—	1	760	Mitchell and Co.
	4	—	4	1955	
DERBYSHIRE.					
Dale Abbey	—	2	2	—	A. Raby.
Morley Park	1	—	1	420	Francis Hurst.
Butterley	2	—	2	1766	Outran and Co.
Chesterfield	2	1	3	1700	Smith and Co.
Duckmanton	1	1	2	900	Smith and Co.
Wingerworth	1	1	2	819	J. Butler.
Stavely	1	—	1	596	Lowe Ward.
Alfreton	1	—	1	1450	Saxleby, Edwards & Co.
Hasland	1	—	1	723	J. Brocksop.
Chesterfield	1	1	2	700	Top and Co.
	11	6	17	9074	
SHROPSHIRE.					
Cornbrook	1	—	1	292	T. W. B. Bolfield.
Clee Hill	1	—	1	303	George and Co.
Old Park	4	—	4	8359	Bolfield.
Horse Hay	2	—	2	3834	Dale and Co.
Colebrook Dale	2	—	2	2962	Dale and Co.
Light Moor	3	—	3	5601	Addenbrook.
Madely Wood	2	—	2	2951	Reynolds.
Benthal	1	—	1	1294	Harris.
Willey	—	1	1	—	J. Wilkinson.
Broseley	1	—	1	1450	Banks and Co.
Kitley	2	2	4	7510	Reynolds.
Billingsley	—	2	2	—	Stoke.
Queen's Wood	1	—	1	2605	Reynolds.
Snedshill	2	1	3	3950	Bishton.
Culcott	1	4	5	2269	Brodie and Co.
Barnets Lason	1	1	2	574	Jesson.
Donnington Wood	2	1	3	3400	Bishton.
Rockwarden	2	—	2	4000	Bishton.
New Hadley	2	—	2	3612	J. Wilkinson.
	30	12	42	54,966	
LANCASHIRE.					
Leighton	1	—	1	780	Earl Balcaras.
Haigh	—	2	2	—	
	1	2	3	780	
LEICESTERSHIRE.					
Ashby	—	1	1	—	Lord Moira.
NORTHUMBERLAND.					
Newcastle-upon-Tyne	2	—	2	2500	Bulmer and Co.
YORKSHIRE.					
Sheffield Park	1	—	1	1905	Booth and Co.
Chapel Town and Swallow Hill	1	2	3	3737	Swallow.
Thorncliffe	2	—	2	2500	Chambers and Co.
Bowling	2	—	2	2473	Sturges and Co.
Low Moor	4	—	4	5143	Jarratt and Co.
Shelf	2	1	3	2716	Haydon and Co.
Birkenshaw	1	—	1	612	Emmett.
Rennishaw	1	—	1	975	Appleby and Co.
Elsecar	2	—	2	2495	Darwen and Co.
Bretton	1	—	1	250	Cook and Co.
Holmes and Milton	3	—	3	3000	Walkers.
Fieldhead	1	—	1	1040	Emmett.
	22	4	26	800	Parker.
				27,646	
MONMOUTHSHIRE.					
Abbey Tintern	1	—	1	987	Thompson.
Bishop's Wood	1	—	1	653	Partridge and Co.
Pontypool	1	—	1	600	Leigh.
	3	—	3	2240	
SOUTH WALES.					
Clydack	1	1	2	2802	Frere, Cook, and Co.
Blandare	—	1	1	—	Barnaly.
Blaenavon	3	1	4	7846	Hill and Hopkins.
Sirhowy	2	—	2	3700	Fothergill and Co.
Ebbwvale	1	1	2	3664	Harford and Co.
Beaufort	2	—	2	4696	Kendale and Co.
Tredegar	2	—	2	4500	S. Homphray and Co.
Hirwain	1	—	1	500	Bowger and Co.
Nanteglo	—	2	2	—	Hill and Co.
Aberdare	2	—	2	3586	Scales and Co.
Abernant	1	1	2	4376	Tapperton.
Melincourt	1	—	1	1000	Myers.
Varteg	1	—	1	1000	Knight and Co,
Ennisyddin	1	—	1	1000	Parsons.
Neath Abbey	—	2	2	—	Foxes and Co.
Carphilly	1	—	1	1000	Harford and Co.
Penruton	—	1	1	—	Raby.
Cyfarthfa	4	—	4	9600	R. Crawshay.
Plymouth	3	—	3	5000	R. Hill and Son.
Pennydarrow	3	—	3	6780	S. Homphray and Co.
Dowlais	3	—	3	6000	Tail and Co.
Llanelly	2	—	2	2267	A. Raby.
Dowey	1	0	1	150	Kendalls.
	35	10	45	68,867	
NORTH WALES.					
Ruabon	1	—	1	1463	Rowland and Co.
Brymbo	1	1	2	462	J. Wilkinson.
Carmarthen	1	—	1	1056	
	3	1	4	2981	
SCOTLAND.					
LINLITHGOWSHIRE.					
Carrow	5	—	5	7380	Carrow and Co.
LANARKSHIRE.					
Wilson Town	1	1	2	1381	Wilson.
Muirkirk	2	1	3	3043	Robertson and Co.
Clyde	2	1	3	2687	Caddel and Co.
Omoa	2	1	3	1852	Dalrymple.
Calder	1	1	2	1077	Dixon and Co.
Glenbuck	1	—	1	790	Dixon and Co.
Shotts	1	—	1	2034	Logan and Co.
	10	5	15	12,864	
CLACKMANNAN.					
Devon	2	—	2	2596	Gordon and Co.
ARGYLESHIRE.					
Argyle	—	2	2	—	
Borrow	1	—	1	—	
FIFESHIRE.					
Marknech	—	2	2	—	Losh and Co.

TOTAL.

Name of Works.	Furnaces. In.	Out.	Total.	Make per year. Tons.
Staffordshire	32	10	42	50,002
Cumberland	4	—	4	1,955
Derbyshire	11	6	17	9,074
Shropshire	30	12	42	54,966
Lancashire	1	2	3	780
Leicestershire	—	1	1	—
Northumberland	2	—	2	2,500
Yorkshire	22	4	26	27,646
Monmouthshire	3	—	3	2,240
North Wales	3	1	4	2,981
South Wales	35	10	45	68,867
Scotland	18	9	27	22,840
Total	161	55	216	243,851

NUMBER OF FURNACES AND MAKE OF IRON IN GREAT BRITAIN IN THE YEAR 1848.

Name of Works.	Furnaces. In.	Out.	Total.	Make per year.	Owners.
STAFFORDSHIRE.					
Lane End	2	1	3	8320	Sparrow.
Etruria	2	1	3	7280	Lord Granville.
Kidd's Grove	3	—	3	13520	Kinnersley.
Tunstall	2	—	2	6240	Williamsons.
Apedale	4	—	4	18720	Heathcote.
Madely	1	1	2	4160	Firmstone.
Silverdale	2	—	2	7280	R. Sneyd, Esq.
	16	3	19	65,520	
Darlaston	1	1	2	—*	Addenbrook and Co.
Bilston	1	1	2	—	Baldwin and Co.
Gold's Green	2	1	3	—	Bagnall and Sons.
Darlaston Green	1	—	1	—	Bills and Mills.
Ellingshall	1	1	2	—	Banks and Son.
Dudley W. & Northerton	2	4	6	—	British Iron Co.
Corngreaves	2	—	2	—	British Iron Co.
Withygrove	1	1	2	—	Best and Bars.
Russell Hall	3	—	3	—	Blackwell and Co.
Woodside	1	1	2	—	Cochrane and Co.
Tipton	1	1	2	—	Creswell and Sons.
Horsley Hole	2	—	2	—	Chillington and Co.
Wolverhampton	2	1	3	—	Dixon, Neri, and Co.
Crookhay	3	—	3	—	Daws and Sons.
Oldbury	—	2	2	—	Daws and Sons.
Parkhead	1	1	2	—	Evers and Martin.
Pelsull	1	1	2	—	R. Fryer.
Lays	2	1	3	—	W. and G. Firmstone.
Shutend	3	1	4	—	J. Foster.
Netherton	1	1	2	—	M. & W. Grazebrook.
Corbyn's Hall	2	2	4	—	Malins and Co.
Horseley	2	—	2	—	J. Hartland.
Dudley Port	1	—	1	—	J. Hopkins and Son.
Buffery	—	1	1	—	J. Haden.
Level	1	1	2	—	W. Igons and Co.
Chillington	3	1	4	—	Barker and Foster.
Coseley	2	—	2	—	G. Jones.
New Duffield	2	1	3	—	G. Jones.
New Birchills	—	2	2	—	G. Jones.
Ketley	—	3	3	—	Jones and Oaks.
Bentley	1	4	4	—	Earl of Lichfield.
Wednesbury	1	1	2	—	Loyds, Foster, & Co.
Park Lane	2	—	2	—	T. Morris.
Oak Farm	2	2	4	—	Oak Farm Company.
Parkfields	3	1	4	—	Parkfield Company.
Bilston Brook	—	2	2	—	J. Parson.
Coseley	2	1	3	—	Pemberton and Co.
Millfield	2	1	3	—	W. Rifley.
Slowheath	—	5	5	—	W. and J. Sparrow.
Osier Bed	2	1	3	—	W. and J. Sparrow.
Willingsworth	1	2	3	—	Sir Horace St. Paul.
Waterloo	1	1	2	—	Sir Horace St. Paul.
Windmill	—	2	2	—	Sir Horace St. Paul.
Capon Field	2	1	3	—	J. Bagnall and Sons.
Birchills	1	—	1	—	E. Tyler.
Priestfields	2	1	3	—	W. Ward Priestfield.
Bradley	1	—	1	—	Trustees of J. Wilkin.
Wednesbury Oak	3	—	3	—	P. Williams and Sons.
Union	2	1	3	—	P. Williams and Sons.
Coneygu	1	2	3	—	Lord Ward.
Level	1	2	3	—	Lord Ward.
Bilston	1	—	1	—	Woolley and Co.
Prior's Field	2	1	3	—	H. B. Whitehouse.
Brettle Lane	1	1	2	—	J. and W. Wheely.
Corbyn's Hall	2	—	2	—	B. Gibbons.
Meadow Furnace	1	—	1	—	Hall, Holcroft, & Co.
	77	62	139		

* Average make of each furnace, 4160 tons per year.

YORKSHIRE.					
Low Moor	5	1	6	14560	Hird, Dauson, & Co.
Bierly	3	1	4	8320	Clayton and Co.
Bowling	4	1	5	10400	Sturgess and Co.
Waterloo	1	—	1	2340	Fenton.
Farnley	1	1	2	2600	Armitage.
Worsbro'	1	—	1	2600	Field, Cooper, & Co.
Thorncliffe	2	—	2	6750	Chambers and Co.
Chapel Town	2	—	2	5200	Schofield and Co.
Park Gate	1	—	1	5200	Schofield and Co.
Elsecar	1	1	2	2340	Lord Fitzwilliam.
Milton	2	—	2	6240	Graham.
	23	5	28	66,560	
DERBYSHIRE.					
Butterley Hall	3	—	3	9880	Butterley Company.
Codnor Park	3	—	3	10920	Butterley Company.
Alfreton	3	—	3	6240	Oakes and Co.
Morley Park	2	—	2	4680	Mold and Co.
Wengerworth	2	1	3	10400	Yates and Co.
Clay Cross	—	2	2	8320	Stephenson and Co.
Starcley	3	1	4	8840	Barrow.
Renishaw	1	1	2	4680	Appleby and Co.
Newbold	—	1	1	4160	Schofield and Co.
Adelphi	—	2	2	8320	Elsom and Co.
Stanton	3	—	3	10400	Smith and Co.
West Hallam	—	2	2	8320	Whitehouse.
	20	10	30	95,160	
SHROPSHIRE.					
Madeley Wood Co.	2	1	3	7280	
Colebrook Dale Co.	8	—	8	24960	
Old Park Iron-works	6	2	8	18720	W. and B. Botfield.
Langley Company	1	1	2	3120	
Lilleshall Company	6	1	7	18720	
	3	—	3	9360	J. Foster, Esq.
Ketley Company	2	1	3	6240	
	28	6	34	88,400	
NORTHUMBERLAND, &c.					
Consett and Crook Hall	7	7	14	29120	Derwent Iron Co.
Birtley Iron-Works	2	1	3	8320	Birtley Iron Co.
Walker Iron-Works	2	—	2	8320	Losh, Wilson, and Co.
Wylam Iron-Works	1	—	1	4160	Bell, Brothers.
Tyne Iron-Works	2	—	2	8320	Tyne Iron Company.
Hareshaw Iron-Works	2	1	3	8320	
Redesdale Iron-Works	2	1	3	8320	Redesdale Iron Co.
Tow Law Iron-Works	2	1	3	8320	Weardale Iron Co.
Stanhope	2	1	3	8320	Weardale Iron Co.
Witton Park Co.	3	1	4	12480	
	24	12	36	99,840	
SCOTLAND.					
Gartsherrie	16	—	16	—*	Wm. Baird and Co.
Dundyvan	8	1	9	—	John Wilson.
Clyde	5	2	7	—	Colin Dunlop and Co.
Govan	4	2	6	—	William Dixon.
Calder	3	5	8	—	William Dixon.
Langloan	5	1	6	—	Addie, Miller, & Co.
Carnbroe	3	3	6	—	Merry & Cunningham
Glengarnock	6	1	7	—	Merry & Cunningham
Summerlee	5	1	6	—	Wilsons and Co.
Monkland	9	—	9	—	Monkland Iron Co.
Coltness	4	2	6	—	Coltness Iron Co.
Omoa	4	—	4	—	R. Stewart.
Shotts	3	1	4	—	Shotts Iron Company.
Castlehill	2	1	3	—	Shotts Iron Company.
Blair	—	5	5	—	Ayrshire Iron Co.
Muirkirk	—	4	4	—	Muirkirk Iron Co.
Garscube	—	2	2	—	John Watson.
Carron	3	1	4	—	Carron Iron Company
Devon	1	—	1	—	Devon Iron Company.
Forth	4	2	6	—	Forth Iron Company.
Kinneil	4	—	4	—	John Wilson.
Lugar	—	4	4	—	Lugar Iron Company.
Eglinton	—	3	3*	—	Wm. Baird and Co.
	89	41	130		

* Average make of each furnace, 6000 tons per year.

NORTH WALES.					
Coad Talon	1	—	—	1560	
Brymbo	2	—	—	6240	
British Company	1	—	—	5200	
Platina	1	—	—	3120	
	5	6	11	16,120	

Name of Works.	Furnaces. In.	Out.	In.	Make per year.	Owners.
SOUTH WALES.					
Cwm Brain	1	—	1	—*	R. J. Blewitt.
Pontypool & Blacadare	1	3	4	—	C. H. Leigh.
Pentwyn Golynos & Var	5	3	8	—	Williams and Co.
Aberyschan	4	2	6	—	British Iron Company
Blainafon	4	1	5	—	Blainafon Iron Co.
Clydach	4	—	4	—	Powell and Co.
Naty Glog and Beaufort	12	2	14	—	J. and J. Bailey.
Coalbrook Vale	1	1	2	—	Brewer and Co.
Blaina and Cwn Celyn	4	2	6	—	Crutluwell and Co.
Ebbw Vale & Sir Howy	8	1	9	—	Dailey and Co.
Victoria	2	2	4	—	Joint Stock.
Tredegar	7	—	7	—	Tredegar Iron Co.
Rhymney	9	1	10	—	Rhymney Iron Co.
Dowlais	18	—	18	—	Guest and Co.
Penydarran	6	1	7	—	Thompson and Co.
Cyfarthu Ynistack & Herwain	13	2	15	—	W. Crawshay.
Plymouth and Duffrin	7	1	8	—	A. Hill.
Gadlys	1	1	2	—	Wayne and Co.
Aberdare and Abernant	6	—	6	—	Thompson and Co.
Pentyrch	1	1	2	—	T. W. Booker.
Penalit	2	—	2	—	Iwons and Co.
Neath Abbey	2	—	2	—	J. Price.
Cwm Avon	6	1	7	—	Copper Mining Co.
Onllwyn	2	—	2	—	John Williams.
Llynvi	1	2	3	—	Joint Stock.
Toudee	1	1	2	—	Sir R. Price.
Amwain	2	—	2	—	Llewellyn and Co.
Cefr Cwse and Garth	2	3	5	—	Maling and Co.
Llandare	1	—	1	—	Sir John Norris.
Banwen	—	2	2	—	Joint Stock.
Ystalifera	6	5	11	—	Ystalifera Iron Co.
Ynisedwyn	5	2	7	—	Crane and Co.
Maesteg	2	1	3	—	Maesteg Iron Co.
Millbrook	1	—	1	—	Millbrook Iron Co.
Cambrian	2	1	3	—	Cambrian Iron Co.
Gwenebrinaeth	2	1	3	—	Walneg and Co.
Trulsarran	—	2	2	—	Nartch and Co.
	151	45	196		

* Average make of each furnace, 4680 tons per year.

TOTAL.

Name of Works.	Furnaces. In.	Out.	Total.	Make per year.
North Staffordshire	16	3	19	65,520
South Staffordshire	77	62	139	320,320
Yorkshire	23	5	28	66,560
Derbyshire	20	10	30	95,160
Shropshire	28	6	34	88,400
Northumberland	24	12	36	99,840
Scotland	89	41	130	539,962
North Wales	5	6	11	16,120
South Wales	151	45	196	706,680
Total	433	190	623	1,998,568

COMPARATIVE STATEMENT OF THE NUMBER OF FURNACES AND MAKE OF IRON IN THE YEARS 1806 AND 1848.

	In. 1806.	1848.	Out. 1806.	1848.	Total. 1806.	1848.	Make. 1806.	1848.
Staffordshire	32	93	10	65	42	158	50,002	385,840
Yorkshire	22	23	4	5	26	28	27,646	66,560
Derbyshire	11	20	6	10	17	30	9,074	95,160
Shropshire	30	28	12	6	42	34	54,966	88,400
Northumberland	2	24	—	12	2	36	2,500	99,840
Cumberland	4	—	—	—	4	—	1,955	—
Lancashire	1	—	2	—	3	—	780	—
Leicestershire	—	—	1	—	1	—	—	—
Monmouthshire	3	—	—	—	3	—	2,240	—
Scotland	18	89	9	41	27	130	22,840	539,963
North Wales	3	5	1	6	4	11	2,981	16,120
South Wales	35	151	10	45	45	196	68,867	706,680
Total	161	433	55	190	216	623	243.851	1,998,558

Confining our remarks to the statistics given above, the increase in our make of iron in the past 42 years, in these districts alone, at once establishes the importance to be attached to the manufacture of iron, with which other metals may be said to be closely allied. There can be no doubt but that the construction of railroads, during the past 15 or 20 years, has considerably added to the demand; while it must also be borne in mind that steel, brass, and other metals, have come in for their share, and our collieries must in like manner have been extended in their workings. True it is that, from the improvements made in smelting within the past 14 years by the introduction of the hot-blast, and altered mode of construction of furnaces, there has been a considerable reduction (say at least three-fifths) of fuel; yet when it is considered that in the period we have named the increased make is eightfold, while the number of furnaces have been trebled, the importance of the question, as applying to our mining industry, must be apparent.

The following is a return of the number of furnaces in the respective years of 1806 and 1848, showing an increase of 407 furnaces, with an increased make of 1,754,717 tons:—

Year.	In.	Out.	Total.	Make.
January, 1806	161	55	216	243,851
January, 1848	433	190	623	1,998,568
Increase	272	135	407	1,754,717

The returns of the Board of Trade for the month ending the 5th July have been recently issued, and present most satisfactory results. The increase in the exports as compared with July, 1848—a month when the effect of the preceding continental convulsions had passed their climax—is 1,494,284*l.* The most gratifying point noticed in the returns of last month is, that the improvement exhibited was not caused by a great increase in a few articles, but that it was spread over almost all, which is still more observable in the present case, only four out of the whole list being on the adverse side, and these for insignificant amounts. Machinery, it will be remarked, is still the item which shows the heaviest falling off. The following particulars will be of interest:—

	1848.	1829.	Increase.	Decrease.
Alkali—viz., soda	£15,911	£21,773	£5,832	—
Coals and Culm	93,566	81,763	—	£11,833
Earthenware	52,534	66,705	14,171	—
Glass manufactures	20,169	21,707	1,538	—
Hardwares and cutlery	165,873	180,875	15,002	—
Machinery	93,871	84,918	—	8,913
Metals	637,211	760,876	123,665	—
Salt	25,234	32,721	7,437	—

The total increase in exports during the first six months of the present year, as compared with the six corresponding months of 1848, is 3,741,613*l.*, and as the decrease of the first six months of that year compared with the same period of 1847, enormous as it was, was not more than 3,822,304*l.*, it will be seen that we may now fairly congratulate ourselves upon having recovered from the check which was then sustained. Judging from the indications of the present return, and the improved prospects consequent upon the opening of the German ports, and the quieter state of Italy; there is, moreover, every reason to anticipate that before the end of the year these accounts will show, not merely a permant restoration to the condition of 1847, but a very considerable improvement upon it.

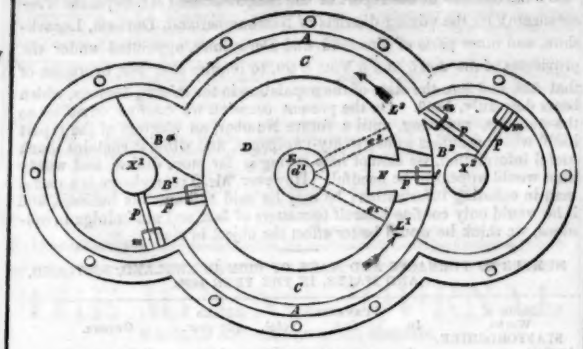
STEAM SCREW APPARATUS.—Messrs. Maudslay's, the eminent engineers, trial of the General Screw Steam Shipping Company's new ship, the *Bosphorus* took place on Monday, in the Thames. The following gentlemen were on board to witness the experiments:—Capt. W. Houston Stewart, R.N.; Capt. Hatstead, R.N.; Mr. Chatfield, Head of the School of Naval Architecture, of Woolwich; Mr. Humphreys, Chief Engineer, of Woolwich; Mr. Dinnen, Inspector of Machinery afloat; Mr. Smith, Chief of Screw Department; Messrs. Maudslay and Mr. Jackson; Mr. Mare, the builder; Mr. Laming, managing director; Capt. Ford, O.N., superintendent. The result of the trials—running the measured mile—was considered by the gentlemen above-named as the most satisfactory that has ever yet been known under similar circumstances, and of which the following are the particulars:—The dimensions of the ship are—Length, 175 ft.; breadth, 25 ft.; measuring in tons, 531 ft.; horse-power, 80; diameter of cylinder, 36 in.; stroke, 24 in.; diameter of screw, 10 ft. 6 in.; pitch, 18 ft. 6 in.; mean revolutions, 62·2; length of engine-room, 30 ft., which includes a space for the stowage of 150 tons of coals; draught of water on trial, forward, 6 ft. 8 in., aft, 9 ft. 6 in., the screw propeller being 14 in. out o the water. The trials of the measured knot were—

First Knot	5 min.	10 sec.	equal to	10·286
Second ditto	6 „	21 „	„	9·448
Third ditto	6 „	4 „	„	9·890
Fourth ditto	6 „	9 „	„	9·756
Fifth ditto	6 „	54 „	„	8·695

giving a mean speed of ship, in knots, 9·679; speed of screw, 11·348; slip in knots, 1·669, or 14·7 per cent. The *Bosphorus* left Blackwall about 1 P.M., and proceeded in capital style down the river, the wind at the time blowing hard from the south-west. After the trial the party partook of an excellent repast, provided by Messrs. Maudslay and Co., during which it was generally remarked that the vibration was so trifling that it was scarcely to be imagined the table was spread in the saloon of a steam-vessel. The elegant form of the *Bosphorus*, her compact, powerful, and smoothly-working engines, and the great combination of comfort and taste displayed in her internal arrangements, were greatly admired.

SCOTTHORN'S ROTARY ENGINE.

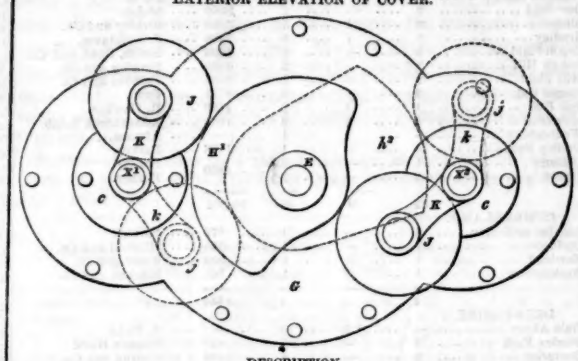
END ELEVATION OF INTERIOR.



DESCRIPTION.

A—*Case.*
B^1—Abutment chambers.
B^1 B^2—Hollow abutments.
C—Steam compartment.
D—Drum.
E—Main shaft.
F—Piston.
L^1 L^2—Direction of pressure of steam, and action of piston.
X^1 X^2 } Abutment spindles.
d^1 d^2 } Tubular passages in shaft from each end, outside of cover to near centre
e^1 e^2 } —for induction and eduction pipes.
f—Metallic packing in piston.
m m m m—Ditto in abutments.
p p p p—Lateral packings.

EXTERIOR ELEVATION OF COVER.



DESCRIPTION.

E—Main shaft.
G—Cover.
H^1—Cam on obverse side.
J J.—Friction wheels on levers on ditto.
K K—Levers set on abutment spindles.
h^2—Cam
jj—Friction wheels } The dotted lines indicate these on the reverse side.
k k—Levers

Note.—Anular metallic packings in the interior of the covers impinge against the circumference of the drum, and form laterally steam-tight joints.

The description of this engine, by "An Engineer," whose communication we gave in our last Number, requiring some illustration to render it comprehensible to the generality of our readers who are not engineers, we deem the subject of sufficient importance to justify our introducing a diagram of the invention. Without expressing an opinion upon its merits, we may say, without disparagement to the capabilities of reciprocating and semirotary engines, it is very probable that, if a full rotary motion can be obtained without the imperfections which form the grounds of objection to all engines of this class, a new era in machinery will commence. We must all recollect the "insuperable" objections which existed to the introduction of oscillating engines; yet it now appears as if the oscillating principle was one of the greatest simplicity; and we only wonder how an objection could ever have been raised to it.

From the days of Watt, who was quite alive to the necessity of rotary motion (Watt and Boulton having taken out three patents, we believe, for machines of this nature), to the present day, innumerable attempts have been made to produce an engine with a rotary action; and it will be among the extraordinary facts of science if a person whom our correspondent describes as a "working mechanic," have realised this desideratum, as indubitably it is. However, it is still a problem, the solution of which exists in a model and drawings; and we must leave it for the present to the judgment of the scientific. The drawings will remain at this office, where those interested may inspect them.

FRANKLIN COXWORTHY'S DISCOVERIES IN NATURAL PHILOSOPHY.—No. III.

Pursuing the examination of Franklin Coxworthy's two first propositions, we must remind our readers that, in our last, we traced, as minutely as we could, the various stages through which he arrived at a correct conception of the formation of snow, which, in accordance with his theory, we find to be a compound of oxygen, hydrogen, carbon, and nitrogen; and that, during its decrystalisation, or thaw, snow is converted into water, ammonia, and carbon.

This conclusion involves considerations of the utmost importance, affecting both the animal and vegetable kingdoms; and, if worth anything, entirely dissipates hypotheses that have engaged the attention and obtained the concurrence of scientific men for ages. Amongst these hypotheses is the hitherto unquestioned doctrine of "the diffusion of gases," by which the elements constituting the atmosphere were *supposed* to be held together or combined; it having been admitted that the oxygen of which the atmosphere is deprived by combustion and respiration, is restored to it by the vegetable kingdom. No attempt, however, had been made to show how, after the separation, combination was again effected! Whether or not *diffusion* operated alike on the gases in whatever proportion they might be mixed, the so-called doctrine left us uninformed. Or when or why diffusion ceased to act, and *gravitation* began to perform its function! In fact, this assumptive diffusion, one of those convenient terms that are sometimes used when reason stumbles upon a difficulty, and impatience jumps at a conclusion, was allowed to set aside, entirely, the principle of gravitation, although no one has ever disputed the fact of its universality. With this anomaly in scientific investigation, Franklin Coxworthy's mind was very forcibly impressed, at an early period of his examination of the question; but it is amongst the latest to which he has given a rational and demopstrable solution.

Our readers are, doubtless, aware that the air we breathe is composed of one part of oxygen, the supporting principle of combustion and respiration, and four parts of nitrogen, a gas which is only distinguished by its negative properties. Nitrogen is neither a supporter of combustion, nor a combustible element. It does not possess either taste or smell. Nor does it appear to perform any particular function during respiration, beyond that of preparing the oxygen, by dilution, for the healthful performance of its use—the purification of the blood, and the maintainance of the heat of the system by slow combination with carbon. Without nitrogen the inhalation of oxygen, instead of promoting vitality, would cause instant death. Nitrogen also renders oxygen subservient to our will in the various operations to which combustion is applied; and of the extent to which it is consumed in this country, and the results that thence ensue, we shall now endeavour to give an approximate estimate.

No means exist for the solution of this important question by an investigation of the atmosphere itself; but, by availing ourselves of the facilities which the atomic theory places at our disposal, we can ascertain the amount with sufficient accuracy. What primarily is necessary to arrive at, is the actual quantity of matter that is consumed, and, chemically, the constitution of that matter. There is raised, annually, in this country 35,000,000 tons of coals. Of this a comparatively small portion is exported; but which is more than compensated for by the use of wood, turf, and other materials for fuel. This 35,000,000 tons, therefore, we may safely assume as the minimum yearly consumption, and as the basis of our calculation.

Coal is a compound of carbon, with a small proportion of hydrogen. Carbon, during combustion and respiration, combines with the oxygen of the air in the proportion of 27 to 73, and hydrogen in the proportion of 1 to 8; but, in order to simplify the illustration, we will consider coal as if it were pure carbon, although our figures must, in consequence, be considerably reduced, there being a great difference, as we have previously shown, in the proportions in which oxygen combines with carbon, as compared with hydrogen.

Now, 35,000,000 tons, multiplied by 73, and divided by 27, will give for the oxygen gas abstracted from the atmosphere no less a quantity than 95,000,000 tons; and, as air is composed of one of oxygen to four of nitrogen, the weight of this gas, annually liberated, must necessarily be about 380,000,000 tons! Which stupendous fact had escaped the notice of the scientific world, until attention was directed to it by Franklin Coxworthy, in 1847, in reference to its influence on the animal and vegetable world—a branch of the inquiry to which we propose hereafter to advert, our present object being to ascertain how far his objection to the doctrine of "diffusion" holds good, irrespectively of other evidence. Continuing, then, our more immediate examination, we have to observe that the gases resulting from combustion and respiration are evolved at a high temperature, and must, consequently, ascend in the atmosphere. But we also know that carbonic acid gas, at the same temperature as the air, is of the specific gravity of 1·5 as compared with 1; or 50 per cent. *heavier* than air; and must, therefore, gravitate towards the earth. And during its subsequent transmission through the vegetable kingdom, of which it is the principal source of food, we are aware that its carbon is retained by the plants, the oxygen being realised through the leaves in a cold state. And the nitrogen, which has a specific gravity denominated only 0·9722, nearly a fortieth part *lighter* than air, ascends to the upper regions. Whilst the oxygen, with a demominated specific gravity of 1·1111, rather more than a tenth part *heavier* than air, is necessarily liberated near the surface. How, then, can we avoid concurring with the opinion of Franklin Coxworthy—that, if designed by Nature to be subject to "diffusion" these elements would have partaken precisely of the specific gravity of air? And what becomes of "the doctrine of diffusion," when no two of the supposed constituents agree in specific gravity? When we see lead swim, and cork sink, we may be inclined to rely, again, upon "the doctrine of diffusion"—but not till then. We have not yet exhausted this portion of our subject.—S.—*Cheltenham Journal.*

A FEW REMARKABLE FACTS ABOUT ELECTRICITY AND ELECTRIC TELEGRAPHS.—No. 1.

BY GEORGE LITTLE.

(OF THE FIRM OF BRETT AND LITTLE, ELECTRO TELEGRAPHIC ENGINEERS, LONDON.)

"*Suum Cuique.*"

It is now nearly 1800 years since Pliny, the historian, made his observations on the property possessed by amber; it is also no less remarkable than an astonishing fact, that this branch of science should have been so neglected—nothing more than the attractive power of amber being noticed during a space of nearly 1600 years, until William Gilbert, of Colchester, and a London physician published a treatise on this subject in Latin; previous to this, as I before said, little or no notice was taken of the attractive property of amber, which was destined to be the forerunner of a science so varied, and at the same time so very wonderful in its results, so much so as to strike even the electrician himself with astonishment—he only knows it from its results, nothing more, not even whence it comes. We pass on from Gilbert, of Colchester, to Nicolaus Cabœus, at Ferrara, who was employed, in 1630, following out Mr. Gilbert's experiments. In 1670, a Mr. Boyle made some discoveries which had escaped the observations of his predecessors and contemporary. With Boyle, we hear of Otto Guerick, the burgomaster of Madgeburg, inventor of the air pump, making some advances, when, for the first time, an electrical machine was made, which consisted of a globe of sulphur, mounted on an axis in a wooden frame, his hand being the rubber; with this machine he discovered the attractive and repulsive property of electricity, which is the very soul of an electric telegraph. In 1675 we hear of Sir Isaac Newton giving an account of similar experiments. From 1675 to 1728 little or no further progress was made, when at this time, 1721, a Mr. Stephen Grey, a pensioner at the Charter House, commenced his experiments with his friend, Mr. Wheeler, who, by their experiments, proved that the electric current may be conducted to a great distance. In 1733, Du Fay, an attendant in the gardens of the king of France, repeated the above experiments of Grey and Wheeler, by passing the electric current through a line 1256 feet in length, which line, I presume from the following, was not a metallic one. Mr. Grey, in 1734, invented metallic conductors, by passing the fluid through iron rods. In 1742, a Benedictine monk at Erford, conveyed the fluid through wires 200 yards in length. In 1745, more attention was paid to this science. Experiments to be tried were publicly advertised and exhibited for money in Germany and Holland. In 1747, Dr. Franklin made his observations on the experiments of M. Monnier the younger, for discovering the velocity of electricity, by passing a current through iron wire 4000 feet in length; and on the 18th of July, 1747, Dr. Watson completed the electric circuit through the River Thames at Westminster. By another experiment, tried on the 5th of August, same year, he proved the conductive power of the earth by suspending a wire one mile in length; and on the 14th of August he repeated the same experiment through two miles of wire, at Shooters Hill, in Kent, making the earth itself part of the circuit, which was a very great step towards a practical application of the electric telegraph. Previous to this, many minor experiments were made by him. The first telegraphic instrument of which we have any account is furnished by Young, in his travels through France (in the year 1784, 4th edition, vol. 1., p. 49); it is stated here that a M. Lomond had invented a mode, by which from his own room he held converse with a person in a neighbouring chamber by means of electricity. His system of telegraphic correspondence is not related. In *Voigt's Magazine*, 1794, vol. 9, p. 1, is an account of an electrical telegraph, made by Reizen; his plan was the use of intermittent sparks of electricity, for which purpose he used 72 conducting wires. In vol. 2, p. 4, of the same journal, we are informed that Dr. Salva, in Madrid, constructed a similar telegraph, the Prince of Peace being a witness to the experiments, and the Infant Don Antonio being engaged with the doctor in improving the instruments; it is stated that the experiments were conducted through many miles; but here again, as with the former, no description is given in detail.

We now pass on from 1794 to 1809, when one Samuel Sommering, taking advantage of the discovery of Volta, invented his voltaic electrical telegraph; in his apparatus he took advantage of the decomposition of water whilst under the influence of a voltaic pile. Such telegraph was constructed and used in the following manner:—Through the bottom of a glass reservoir 35 golden points were made to project, marked A, B, C, &c., 25 of which were marked with the 25 letters of the German alphabet and the 10 numerals; the 35 points were each connected with an extended copper wire soldered to them, and extending through a tube to the distant station, and then soldered to 35 brass plates upon a wooden bar; through the front of each plate a small hole was left for the reception at pleasure of two brass pins, which were in connection with the battery or voltaic pile—one with the zinc, the other with the copper; each of the 35 plates were lettered, and the corresponding points in connection also. The glass vessel was filled with dilute acid; therefore, whenever contact was made, or in other words, the two brass pins of the battery were placed in two holes of the brass plates, so as to complete the circuit; an evolution of gas immediately took place at the golden points in connection, so that whatever letter such point was known by, such was the letter intended to be transmitted—for this telegraph 35 wires were required.

In the *Encyclopedia Britannica*, 7th edition, page 662, we see an account of an electric telegraph invented in 1816, by a Mr. Ronalds, of Hammersmith; his instrument consisted of a circular brass plate fixed upon the seconds arbor of a clock, which beat dead seconds; this plate was divided in 20 equal parts, each division being worked by a figure, a letter, and a preparatory sign; the figures were divided into two series of the units, and the letters were arranged alphabetically, except the letters J, Q, U, W, X, and Z. In front of this was fixed another brass plate, which could be occasionally turned by the hand, and which had an aperture just large enough to expose one of the figures, letters, and preparatory signs at pleasure. In front of this plate was suspended a pith ball electrometer, which was insulated, and in communication with an electrical machine on one side, and on the other with the conducting wires, which were buried in the earth, enclosed in glass tubes; at the further end of the wires was an apparatus exactly the counterpart of that just described, and adjusted so as to beat together as nearly as possible; his method of operating was to charge the wires with electricity, so as to cause the pith balls to repel each other. It must be borne in mind that the plate with the signs was constantly being carried round with the seconds arbore of each clock; the plate with the aperture remained stationary, so that immediately the pith balls were seen to diverge or repel each other, that moment the sign or letter which was being exposed through the aperture, was the sign or letter intended to be transmitted, so that by means of such discharges at one station, and by marking down the letters, figures, and signs, seen at the other, any required word could be spelt. This experiment was tried through eight miles of wire, in the first instance suspended upon silken strings, and in the second through 525 feet of wire enclosed in glass tubes, and buried in the earth. The proper name for this instrument should have been a "Uniformity of Time Telegraph."

[*To be continued in next week's Journal.*]

ELECTRIC TELEGRAPH BETWEEN LONDON AND PARIS.—The French Government has accorded to Mr. Jacob Brett the authorisation to establish on the coast of France a submarine electric telegraph between Calais and Boulogne, which, crossing the Channel, will go to Dover on the coast of England. The treaty entered into with Mr. Brett guarantees certain advantages to the French Government, and leaves all the expense at the charge of Mr. Brett, assuring him, however, a privilege for 10 years, in case the experiment should succeed. The works must be terminated by the 1st Sept., 1850, at the latest; but it is probable that they will be finished sooner. This first application of the submarine electric telegraph, if it should succeed, as from the long examinations which have been made there is every reason to hope, will produce on the relations between France and England results, of which it is impossible at present to estimate the importance. Dover, the point at which the submarine telegraph is to join England, is united to London by a direct telegraphic line; the capitals will be in this manner in almost instantaneous communication.

Original Correspondence.

MR. COLWELL ON EXPLOSIONS IN COLLIERIES.

Sir,—There is too general a disposition among those engaged in mining pursuits to contemn and disregard all suggested plans for improving the ventilation of mines which may happen to be originated by parties unconnected with collieries. There is nothing so very difficult to understand in the mode of working or in the general economy of a colliery, but that a person of intelligence may speedily acquire a correct notion of it; and it ought to be remembered that neither Dr. Clanny, or Sir H. Davy, or Mr. Fourdrinier, were colliers, yet to them we are indebted for inventions of undoubted practical utility. 'Tis true that many schemes are proposed which are impracticable, or, if practicable, would be inoperative to anything like the extent imagined. Yet the motive which induces the publication of these schemes is a good and benevolent one, and entitles the authors of them to respect and courtesy. In "Black Diamond's" remarks on Mr. Colwell's scheme, in your Journal of the 4th inst., it is to be regretted that recourse was had to denunciation and ridicule rather than to argument and quiet reasoning. Be the merits of the scheme what it may, it was, at least, ably and temperately introduced to the notice of your readers, and clearly entitled to their respect, even if they could not assent to its feasibility. The great importance which attaches to everything connected with the ventilation of mines, and the constantly recurring instances of the wholesale destruction of human life, which is caused by an inattention to preventive means, more than justifies any attempt to suggest improvements and remedies; and if some of these are crude, and ill-adapted to accomplish the proposed object, it ought to be borne in mind that, to persons unacquainted with all the existing means, and hearing of repeated explosions, involving the destruction of hundreds of men, it is but natural that their sympathies should be aroused, and an earnest desire excited to minister, to the best of their ability, to the alleviation of so great an evil. Such attempts have not been invariably unsuccessful, and the authors of them are entitled to the gratitude of all engaged in mining pursuits. Your last Journal had scarcely issued from the press when a terrible explosion took place in a colliery in this neighbourhood, by which from 50 to 60 men were killed, and several others were severely injured. All comment on this calamity would be premature, until the coroner's inquest has elicited the facts in relation to it. It is to be hoped that the frequency with which these dreadful accidents have recently occurred will not have the effect of indurating the public feeling, but of exciting stronger sympathies, and more active exertions, in favour of the miner.

Mr. Colwell seems to think that these awful visitations are owing "to the defective system of ventilation," which is undoubtedly correct; but it may generally be assumed, that were the most perfect systems adopted the number of explosions would be very considerably reduced. The greatest proportion of the lives lost are sacrificed by the neglect of preventive measures of proved efficacy. No explosions, or, at least, any that have been attended with fatal consequences, have occurred in collieries where Struvé's ventilator, Gurney's steam apparatus, or Brunton's fan have been employed; yet we do not find that the success of these means has induced their general adoption. Some do not even incur the expense of a furnace, and in other collieries where it is used, it is so imperfect in design and carelessly attended to, as to be rather a lure to destruction than a means of safety. There are other means of prevention, either altogether neglected, or so carelessly conducted as to be inoperative for safety. Under these circumstances, it is no wonder that explosions should frequently occur, and it is evident that their prevention does not so much require the aid of new inventions as the stringent application of known means.

Theoretically, there is some plausibility in the plan proposed by Mr. Colwell; but he presumes on the atmosphere of a mine being in a state in which he will rarely find it in a really well ventilated fiery colliery in full operation. As "Black Diamond" truly observes, the gases and the air are generally blended together, and none of them exist in an unmixed state, at least to any extent. The constant motion of the air, and the passing of trams, men, and horses through it, prevent its subsiding into layers according with its specific gravity. The separation of the gases from the air, therefore, in the manner proposed by Mr. Colwell, may be fairly doubted, and the expediency of the plan questioned. Yet the subject is worth investigation, and exact observation may prove the admixture to be less than is here supposed; and in imperfectly ventilated mines it may probably be as described by Mr. Colwell. But parties who so obviously disregard safety to the men, as to neglect the ventilation, will scarcely incur the expense proposed in making these bags or dams. The best of all preventives to explosions is a thorough ventilation, and any suggestion which may tend to its improvement ought to be gratefully received and well considered.—J. Richardson, C.E.: *Neath, August* 14.

Mr. COLWELL ON EXPLOSIONS.

Sir,—Since this gentleman so anxiously and so laudably courts remarks upon his suggestions relative to explosions, I will take the liberty of entreating a portion of your space. In your Journal of the 28th July, Mr. Colwell lays down the principles of his project, by subdividing the ventilating current into the light carburetted hydrogen, the common air, and the carbonic acid gas, after which he provides cells for the first and last-mentioned, as follows:—The roof to be carried up beyond the level of the top of such drift-way, in the form of an umbrella, and the bottom to be carried below the level of the thill, like an umbrella inverted—this cell to be divided midway, if practicable, and bricked up again in front, but an aperture to be left the width of the drift, so as to catch the floating hydrogen riding upon the atmospheric air, and a similar aperture to the well beneath, to catch the carbon, both of which will, I apprehend, detach themselves from the pure air, and become lodged in the trap." The respective contents of these cells Mr. Colwell would remove by means of pipes, with stop-cocks, &c., and, if needful, such pipes to be operated upon by means of air-pumps, or otherwise.

There have really been so many funny theories broached by means of pipes, that the very name of piping causes an involuntary smile to the practical man. These theorists are continually harping up truisms, with which the most ignorant collier is quite familiar—viz.: that fire-damp is lighter, and choke-damp heavier than common air; but he might as well attempt to separate the respective gases of the atmosphere which he breathes in the Borough-road, as to trap those same gases in the current atmosphere of the mine, and, undoubtedly, where the air is stagnant, these gases, in some degree, separate themselves; hence the carburetted hydrogen is always found most abundant towards the top; but the idea of drawing the gas from every pothole, or fall in the roof (which is equivalent to his artificial umbrella), by means of pipes, is so entirely puerile, that few practical persons will give themselves the trouble of a remark upon it, because they know that in an extensive mine the thing is impossible. Like all theorists, Mr. Colwell leaves us entirely in the dark as to the size of his pipes—their cost—by what means he will defend them from the constant falls in the roof—how the cocks are to be regulated, &c.; in short, his sole theory is founded on the fact of the specific gravity of the respective gases. Piping of gas is a common expedient in mines, but then the part must be insulated before he can catch the gas, and reject the surrounding air, whose natural tendency is to rush into and fill all such pipes. But since the above was written, Mr. Colwell has visited the interior of Wall's-End Colliery, and I confess I was prepared to expect an acknowledgment of his error; but, on the contrary, he says "he still contends that the impurities of the atmosphere can be separated from the pure air, to a very great extent, in the manner he proposed—the current materially increased, more equally distributed, the danger of extreme lengths diminished, the necessity of additional shafts abated, and a greater per centage of coal obtained." These, indeed, are bold assertions; but the writer leaves us to imagine by what means he is to effect such wonderful changes, for he locks the secret up in his own breast. How does this square with his boasted philanthropy? Sir H. Davy yielded up his invaluable discovery for the benefit of the mining population, trusting that they would have sagacity enough to discover the merit, if any, which belonged to his invention. If Mr. Colwell imagines that the sagacious miners of the north are to be theorised without a practical test, he will find himself mistaken. He concludes with a panegyric upon Struvé's ventilator, which, together with the piping system, he imagines will supersede Mr. Clarke's three furnaces; but until an intelligible plan, with details, are substituted for vague theory, these novelties cannot find a footing in these enlightened days.

A Viewer.

Houghton-le-Spring, Aug. 14.

[It is also due to Mr. Struvé to state, that his application is not merely based on theory, but actually in successful operation.]

EXPLOSION AT ABERDARE, SOUTH WALES.

Sir,—According to what might be expected, another dreadful explosion has occurred, by which 70 poor persons are hurried into eternity; and, according to the statement in some of the papers, all owing to the injudicious conduct of some of the colliers—just as if the poor colliers could set fire to an otherwise safe colliery. As to investgation after thedeed is done, what end does it answer?

How awful is the responsibility attached to those men vested with authority, who have successively cushioned the bills of humane Members, who only prayed that inspectors might be appointed for the preservation of the lives of the poor colliers and their families. Notwithstanding the continual succession of these dreadful events, and of the stirring and unanimous opinion of the persons examined by the Committee of the Lords, that there ought to be a controlling check, yet all is put off, under the plea of more information, to acquire which two commissioners are appointed to develope the vast extent of mining explorations with which this kingdom abounds. And who do we discover to be the talented individuals who are commissioned to perform this herculean task? As for Mr. Phillips, he is, undoubtedly, a first-rate geologist and theoretical lecturer; but what acquaintance has he had with practical mining? None at all. And what better success can he assure us of, than attended Messrs. Lyell and Faraday after the Haswell explosion? Next comes Mr. Blackwell, of Staffordshire. It will soon be seen that it is a cruel insult upon the understandings of Members of the Legislature, as well as colliery proprietors and viewers, but, above all, the poor people whose lives are sacrificed to such untoward influences, that such contemptible jobbery—for jobbery it is—should exist. Whatever, Mr. Editor, may be the pretended motive, it cannot redound to the credit and character of any Administration which will stem such a torrent of examinations and petitions as belong to the subject. In short, it is a national disgrace, and the tears and wailings of the poor relicts must call aloud to Heaven for vengeance.—Justitia: *August* 16.

[This is one of the many letters addressed us on this fearful and important subject. The writer, we have reason to believe, gave evidence before the Committee of the House of Lords; but, as he very properly observes, "what end does it answer." There is no question that the late appointment of commissioners is a rank "job."]

PYROGEN AND CHOLERA.

Sir,—During the prevalence of cholera last year in St. Petersburgh, it was observed that the electric state of the atmosphere was affected in a peculiar manner. When the disease was at its height, the action of the magnet was nearly neutralised, but as the disease gradually subsided, the magnet assumed by degrees its former power. A magnetic block which used to carry 80 lbs. would, during the worst time of the cholera, not carry above 13 lbs., and the electro-magnetic telegraph at one time would not work. M. Audrand's letter, which has recently gone the round of the public journals, stating that he could only obtain feeble sparks from his machine during the prevalence of the disease at Paris, and at last, on the 7th June, when it was at its height, his machine was quite dumb; but on the 8th the sparks reappeared, and, "towards evening, a storm announced at Paris, that the electricity had re-entered its domain," seem to prove a similar thing. It was also observed, when this scourge visited London, about 17 years ago, that there was a cessation of the disease in St. Giles's after a violent thunder-storm.

In reference to its prevalence in America at the present time, the American journals state that a dullness, nervousness, and lack of energy, are manifested by every one. The atmosphere is hot and humid. Flies swarm in myriads. Vegetation grows with the rankest luxuriance; and animal life sinks proportionably. The very small quantity of electric fluid in the atmosphere, for seven weeks previous to the last accounts, in that country, has deeply engaged the attention of the scientific world. Thus far, observations on this subject coincide; but, during the prevalence of cholera at Gosport, I made daily observations, similar to those described by M. Audrand, and found the sparks equally as vigorous as in healthy seasons, if not more so; and this state of the atmosphere continued during the whole time that cholera prevailed. It might be thought that I was too far from the scene of the disease to make my observations of any value; but this could not be the case, for within three minutes' walk of my house, out of one family of five, four were swept off in three days; and an entire family, at a less distance, shared a similar fate, besides many other individuals. One remarkable feature of this case is that, after the cholera disappeared from Gosport, the sparks to be procured from the prime conductor of my machine were comparatively feeble, and continued so for some time—indeed, I cannot say that they have yet recovered their usual intensity. Another equally remarkable point is, that one day there was a severe thunderstorm, which did not, however, as in Paris and St. Giles, produce any abatement in the disease. In fact, there were several thunderstorms here since the disease begun; but as far as I have been able to learn it was not stopped in its progress in Portsmouth or its neighbourhood. The manner it has raged here, also seems to be opposed to the idea of its originating in the electric state of the atmosphere; for it spent itself in spots a short distance apart—whilst the intermediate points were perfectly healthy, although possessing the conditions supposed to be necessary to produce a predisposition for the disease—namely, dirt, insufficient clothing, and bad and irregular living. This difference that has been found in the neighbourhood of Gosport, is very interesting, and shows the necessity of further observation before a correct conclusion can be arrived at.—J. J. Lake: *Ordnance Office, Portsmouth, August* 15.

SAFETY-LAMPS.

Sir,—I beg to submit for the consideration of those of your readers who are engaged in coal mines, whether the danger resulting from strong draughts of air, causing the flame inside safety-lamps to pass through the meshes of the wire-gauze, and thus fire the inflammable air outside, referred to in Mr. Robinson's letter (*Mining Journal*, August 4), might not be avoided by using Dr. Clanny's lamp, with a second envelope of wire-gauze, or perforated zinc, a small space being left between the two envelopes. By this arrangement, should the flame pass the inner envelope, the firing of the mine would be prevented by the outer one; and when it was discovered that the gas between the two envelopes was burning, the lamp could be removed. This plan cannot be applied to Sir H. Davy's lamp, as it would produce too great a degree of obscurity. J. J. Lake.

Ordnance-office, Portsmouth, August 15.

VENTILATION OF MINES—SAFETY-LAMPS.

Sir,—I have read with no little surprise Dr. Robinson's (of Newcastle) gunpowder experiment, as detailed in your penultimate Number. Innumerable as have been experiments upon safety-lamps during the last 30 years, I will venture to assert, that such an attempt in chemical science, as applied to safety-lamps, was never even contemplated by any person conversant with chemical manipulation. Having fired off the Davy and Clanny safety-lamps, *a la* Ernst (that chief Professor of pyrotechnics), Dr. Robinson draws the following inference:—

> The immediate cause of this transmission of the flame to the exterior of the wire gauze is, doubtless, the same as in the well known cases, where a strong current of air has been found to act in like manner—the effect being simply due to the mechanical force pressing the flame against the wire gauze. It becomes, therefore, most important to determine whether the ignition within either of these lamps, of even a small quantity of explosive gas, at a moment when the upper part of the cylinder contains a large mass of flame, will not create a sufficient amount of pressure to force that flame through the apertures in the gauze, and thus produce the dreaded result.

Had the doctor performed only one legitimate experiment, in proof of his inference, with fire-damp instead of gunpowder, he would have merited some credit for his good intentions in the cause of suffering humanity; and I promise him that when such shall be published, I shall have much pleasure "in breaking a lance with him," but not in his novel Woolwich method of "proving" safety-lamps. W. Reid Clanny.

Sunderland, August 15.

[We shall be well pleased that a subject so important as that treated on should receive the attention of our correspondents, and doubt not but that Dr. Robinson will set himself right in reply.]

PREVENTION OF SMOKE.

Sir,—I wrote you on the 29th July, respecting a most flagrant infringement of Mr. Charles W. Williams's patent argand furnace, and since then have examined the furnace in company with Mr. Andrew Smith, a gentlemen for whom I entertain, personally, the highest respect. I perceive by your Journal of last Saturday that Mr. Smith has written you to say:—"Mr, Dircks accuses me of infringing this patent; but I beg to call his attention to a fact he well remembers—that I had practised this mode of preventing smoke years prior to the date of the patent he accuses me of infringing; and that I did, in the presence of witnesses, point out to him a furnace on the same principle, erected at my works at Millwall, Poplar, and have also more than once informed him that I erected three furnaces on the same plan at Great Grimsby, in the year 1836." It is with sincere regret that I feel called upon to state, in language equally clear and distinct, that I never knew Mr. Smith had any more than an ordinary furnace at Millwall, though I have passed by it many times, and least of all did I suppose he there used, or claimed to use, the patent argand furnace principle.

In regard to the three furnaces at Great Grimsby, I never knew or heard anything about them until the week before last, when named to me by Mr. Smith himself; but Mr. Smith even goes so far as to declare as "a fact," that I "well remember that he had practised this mode of preventing smoke *years prior to the date of the patent.*" Now, as the patent is dated in 1839, and my acquaintance with Mr. Smith commenced in 1840, it is a fact amounting, I think, to a mathematical demonstration, that Mr. Smith has called my attention to what is not only not "a fact," but what could not have happened under the circumstances. In short, I most seriously and unequivocally beg to state, that the reports about the furnaces at Wapping, gave me the first intimation that Mr. Smith had attempted any improvements in the Argand furnace, and employed its principle in any way whatever. As regards the public, however, it is important that your Journal should be made the medium of communicating useful and available information; therefore, I may as well observe here that, giving Mr. Smith, as a practical engineer, all the merit he claims over Mr. C. W. Williams, who is *only* a civil engineer, largely interested and extensively engaged in the practical operations of two large steam-packet companies, and allowing him the benefit of his four furnaces, *that* fact would not invalidate Mr. Williams's patent, any more than the three or four cases of private prior use of hot-blast affected the genuineness of Neilson's celebrated patent.—Henry Dircks: 32, *Moorgate-street, City, August* 15.

COPPER SHEATHING—"T. H. S's" MODERN IMPROVEMENTS.

Sir,—In reply to "T. H. S.," the term "laboratory experiments" was not intended to apply to those of Faraday and Phillips, but to my own; from which I understood him not to expect much advantage. With this my own opinion coincided (as often expressed), unless so far as they are helps to, and helped by, the proposed discussion; in which I hope he will take an interesting part, and for which your abridgment of Mr. Vivian's paper is a substantial introduction. A few particulars in point are omitted, but they can be supplied with the system of queries; and there is a preparatory operation of prime importance—the selection and mixing of ores—which will bear a good deal of investigation, in relation to the quality, as well as quantity, of the product.

Another great advance would be gained in our inquiry, if one (or more) of your cor respondents would give us a concise and *comparative* view of all the new modes of smelting of the last seven years, now actually at work with success, such as Napier's, &c. (not, of course, the multitude of patent fancies, which vanish as fast as they appear), pointing out their advantages, proposed as well as real, and impartially noticing their defects, if any. Most of them will be found in your columns, and I dare say you can tell where all are to be seen at work or heard of. This would, probably, lead to communications from the new smelters, which may bring out those of the old school in their own defence. May I ask whether "Germanicus" or Mr. Birkmyre (or both) will undertake this good office?

August 14. J. Prideaux.

NOVEL MODE OF RAILWAY PROPULSION.

Sir,—Under the above head you inserted an article last week, from which it would appear that a Mr. Thompson has made a model of a locomotive carriage, which is to be propelled by the power obtained by a falling body acting on the periphery of a fly-wheel. Should his plan succeed, I shall consider that long-sought for *ignis fatuus*—the perpetual motion—to be found; for it is clear that, if the proposed machinery will *assist* to propel a train, it will, as a matter of course, possess the necessary power to carry itself unencumbered by a train forward. There are frequent disputes as to the credit due to different parties for novel and valuable inventions; I will venture to say, however, that if Mr. Thompson has discovered that *less power* is required to raise a weight to the top of a wheel than the said weight will give in its descent, his discovery will not only prove most valuable to the public, but will indisputably place his name far above that of any engineer of the present or any other age. J. W.

Mold, August 13.

THE CROWN PROPERTY OF NORTH WALES.

Sir,—My attention has been called to an article in your paper of Saturday last, on the subject of the state and management of the Crown property in North Wales. I know not upon what authority the article is founded, but as direct allusion is made in it to the Penrhyn Slate Quarry, as having been taken possession of under cover of a lease of certain Crown rights in the hundred of Uchaf, granted to Lord Penrhyn in 1784, I beg to inform you that that quarry, and the adjoining common, have always formed part of the Penrhyn estate, and that the lease mentioned does not confer upon the lessee the privilege of quarrying slate, or stone, at all, both of which are at this moment worked in the parishes named in it by parties totally unconnected with the Penrhyn property, under distinct leases from the Crown. The only advantage derived under the lease is the privilege, such as it is, of shooting over the common lands in the parish of Llanllechid, the amount annually paid to the Crown by the lessees having always exceeded any revenue derived by them, they having expended large sums in search of minerals without any return. There is no truth in the statement that application has been made for a renewal of the lease.

Lime Grove, Bangor, August 13. James Wyatt,
Agent for the Penrhyn Estate.

FUMIGATION OF LONDON SEWERS WITH CHLORINE GAS.

Sir,—As so many suggestions have been made by different parties, with the view of preventing, or checking, the effluvia which is continually escaping from the sewers, and more especially at the present time when such an object is so desirable, whilst the cholera is raging amongst us, perhaps you would permit me, through the columns of your valuable Journal, to suggest the fumigation of the sewers with chlorine gas, which I would effect in the following manner:—Over several of the entrances, or man-holes, into the various sewers I would make a small fire, in order to create a current of air in each sewer; at the other ends of the sewers I would fix my apparatus, and, with the current of air, send through every sewer a sufficient quantity of chlorine gas for a perfect fumigation. My fire-grate I would so construct over these entrances, or man-holes, that the whole of the vapour drawn from the sewer to create the current of air should pass through the fire, and thereby destroy its offensive properties. It is well known that chlorine gas is the most perfect disinfectant agent we know of—consequently, the sewers, both in London and other towns, might be effectually fumigated (I should say once per week whilst the cholera is raging) at a trifling expense, to the general benefit of the population.—G. Shepherd, C.E.: *Fleet-street, August* 17.

California.—From California we have advices to the 20th of June, by the steam-ship, *Panama*, which left San Francisco on that day, with about 100 passengers, and $500,000 in gold dust and specie, and arrived at Panama on the 11th July. The American barques, *Tasso* and *Ellen Francis*, were waiting at Panama for passengers to go up to San Francisco. Several other small vessels were also bound up with passengers. There is but one opinion among the passengers with regard to the gold in California—it is still found in great quantities; but it is only the persons accustomed to hard work that can stand the fatigue of digging it. The number of persons at the mines is estimated at between 20,000 and 30,000, about one-half foreigners. Business at San Francisco was very dull, and dry goods and provisions selling below the original cost. Lumber was still in great demand, and selling for $850 per 1000. The *Oregon* steamer would leave San Francisco the 1st of July, and expects to be in Panama on the 20th. About 100 Americans were waiting at San Blas for a passage up; among them was the Reading Company, of Pennsylvania. The British frigate, *Constance*, was at San Blas, with $2,000,000, bound to Mazatlan, on the 21st of July. Annexed is the amount of gold on board the *Crescent City*, as freight:—$77,900, Howland and Aspinwall; $10,000, A. R. Eno; $10,000, E. Bartlett; $47,600, S. M. Williams; $18,208, J. G. King and Sons; $10,000, E. Bartlett; $1803, S. Knapp; $868, D. Barrett; $13,500, Livingston, Wells, and Co.; $18,000, J. E. Eagleston; $18,920, N. A. Bachelor; $12,000, G. H. Gould; $1391, Grinnell, Minturn, and Co. The whole amount of specie on board the *Crescent City* is $231,994. Freights very high, but no seamen to navigate; $150 per month are the common wages. Gold is $15 75 c. per ounce; Spanish doubloons, $16. Exchange on New York at par, $4 80 c. per pound sterling on London.

Gold from Russia.—An arrival of gold to the amount of 195,000*l.* took place last week from Russia—95,000*l.* was on Government, and 100,000*l.* on private account—the latter by special permission—the export of gold, under ordinary circumstances, being still prohibited.

TIN TRADE IN THE SEVENTEENTH CENTURY.

In the year 1698, in consequence of a fall in the price of tin, the tinners of the county of Cornwall and Devon published a proposal for the redress of their grievances, and the raising of the price of their tin. It states that, "in the year 1692, according to the coinage books, only 11,174 pieces were coined; the duty, being then 4s. per cwt., amounted that year to 5449*l.* 17s., making only 27,249 cwts. raised; that quantity, sold at 50s. per cwt., would realise 69,222*l.* 10s.; out of this was to be paid to the bounder and lord of the soil about one-fifth, which would amount to 13,844*l.* 8s.; the charges of smiths' work, timber, ropes, and candles, were computed to each man, in a year, about 20s., which for 8000 men would be 8000*l.*; and supposing the dressing and stamping to make every cwt. of tin come to 2s. 6d., it amounts to 3406*l.* 2s. 6d.; the charges of refining that year's tin at 30s. the tide, computing 1000 of tin to be refined in each tide, come to 2725*l.* 7s. The charges of carrying and the expenses at the refining or blowing-house, at 10s. the tide, the whole sum to be deducted comes to 28,884*l.* 9s. 10d., which deducted, there remains to be divided among 8000 tinners but 40,338*l.* 0s. 2d., which comes to 5*l.* 0s. 10d. and about ½ farthing to each tinner, and this is all each tinner hath to maintain himself and family, and for his whole year's hard labour, not only under ground, but under God knows how many grievances.

"The Cornish factors and others are not the only causes of the poor tinners' misery—the Cornish *lawyers* must come in for a share too; for as the factors grind the poor tinners, to gratify the principal traders, and thereby increase their commissions, so the lawyers (upon the discovery of a rich mine) taking the advantage of the tinners' ignorance in the Stannary laws, they being not set forth, and published in print, do use all means (by way of pretended justice) to right those clients against the bounder, the landlord, or the fellow-adventurers, when, in truth, it is in the main a contrivance to make themselves masters of those mines, and the profits thereof, and the tinners the slaves, only to dig the ore for them; and this they sooner do, because the fees are so great, and the lawsuits which they create so dilatory, that in proportion they exceed all other grievances; whereas the tinners' privilege, as I am informed, is to have their proceedings at law altogether in English, and, upon payment of one penny only, they are at liberty to appear in person, and to speak and act for themselves, that their causes may be the sooner ended. The quantity of unwrought tin transported from London in the year 1692 amounted in the whole to 61,413 cwts., besides the unwrought tin transported from other places.

"The reasons for raising the price are because the public use of silver plate is so much abated in the nation—because tin improved by art is next in nature to gold and silver; and it is the honour and interest of the nation to refine tin—it being our own commodity. The higher the price of tin, the more it will be in fashion; the more it is in fashion, it will be refined; the more it is refined, the more fitter it will be for plate; the more tin there is in plate, the more silver we shall have in money—the more money we shall have to lay out on the most refined and fashionable pewter. The finer the pewter is in quality and fashion, the higher will be the price of tin. The higher the price and quality of tin, the greater quantity will be consumed; the greater the consumption is, the better it will be both for the rich and poor. The poor will get more wages, and the rich more wealth; for *all markets are governed by the first market price;* and as the quantity, quality, and price of tin shall rise, the more it will be for the honour and interest of the nation in general; and the counties of Cornwall and Devon, in particular, will be the better enabled thereby to serve their country in mind, body, and state. The better, therefore, to prevent the Cornish factors underbuying one another, and bringing down the price of tin, to the prejudice of the public, that a law may be made here, that no one shall buy or sell tin under 3*l.*, 3*l.* 10s., or 4*l.* per cwt.; for the higher the price has been, the better the commodity goes off. The Dutch do not import so much tin from the East Indies in 20 years as the county of Cornwall in one. The tin brought by them is from the kingdom of Siam; the principal places whereof are Jahore, Perah, and Quedah; and where it is sold by a weight, called a bahar, which is equal to about 390 lbs. avoirdupoise. In Siam it fetches about 12*l.* sterling per bahar.

"The Dutch have made some attempts to engross this commodity, and did contract with the King of Siam for the whole quantity, at the rate of 9*l.* per bahar; and they obliged the King of Perah by force to sell all he has to them; and they used formerly to block up the port of Quedah, to prevent its sale there to any but themselves. Germany, by its nature and situation, cannot afford so good tin as England, nor so cheap, by as much as 3*l.* per cwt., and when tin was above that price, we have supplied that country as well as Holland. The miners' wages being fallen from 30s. to 15s. a month, great distress has been the consequence; the only way in which to remedy it, is to make a law to prevent the price of tin falling at least under 3*l.* per cwt.; and though it is the interest of the factors, the pewterers, and merchants, to buy cheap and sell dear, yet where the private gain doth not occupy the public good, there will be little commonwealth to carry on a vigorous war; and as Britain hath its name from the tin which was first found in the county of Cornwall, we cannot begin to regulate trade, and to raise the nation better, than by trying all experiments upon that useful commodity, whereby we may raise the kingdom to a pitch of honour and empire, which Old England (in all its glory) was never capable of acquiring." The proposal concludes with this appeal to the king and kingdom—

"Henry, the VIII., of this great nation,	And now the king is almost rife,
Began the famous Reformation.	To cut the third out to the life,
His daughter, Queen Elizabeth,	And raise this nation to that stature,
Finisht the second er'e her death;	For which it was cut out by Nature,

And 'twas the nature of our white tin,
From whence it hath the name of Britain."

JAMES BOYDELL, LAND, MINE, AND MACHINERY VALUER, AND AGENT,
No. 54, THREADNEEDLE-STREET, LONDON, 47
HAS TO DISPOSE OF
Several PATENT RIGHTS, FREEHOLD ESTATES, LEASES of FOUNDRY and ENGINEERING WORKS, FREESTONE QUARRY, and COAL and IRONSTONE MINES. SHARES in a well-known SLATE QUARRY, the PART, or the WHOLE, of a well-established GAS WORK, and STEAM-ENGINES and MACHINEY of all descriptions.

TO ENGINEERS, BUILDERS, AND ARCHITECTS.

JAMES BOYDELL, 54, THREADNEEDLE-STREET, having been a very large manufacturer of machinery and irregular shaped iron, and having accomplished the rolling of some descriptions of the latter, thought by many to have been impracticable, will be happy to ASSIST any ENGINEERS, SHIPBUILDERS, and ARCHITECTS, in the planning of the details of what IRONWORK they may have occasion for, or bringing to perfection any invention in machinery, as well as procuring such materials for the purpose as they may require.

TREBARVAH MINES, situate in the parish of PERRANUTHNOE, in the county of CORNWALL. 48
Consisting of 2048 shares.
CONDUCTED UPON THE COST-BOOK PRINCIPLE.

The Trebarvah Mines are situated within two miles of Marazion, and the port from whence the produce will be shipped. They are also contiguous to the Great Wheal Neptune Mine, which formerly yielded monthly profits of from £1500 to £2000, and for many years was one of the most productive mines in Cornwall. The sett is very extensive, being fully a mile in length on the course of the lodes, by half a mile in width, and is held under leases for 21 years, at 1-18th dues.

There are several lodes in this sett, two of which only have been worked upon, running parallel to, and being distant about 70 fathoms from each other—the one to the north possessing the usual indications of rich copper lodes found in this district. Large quantities of tin have been already extracted from its back, and recent discoveries justify the conclusion that much more may be obtained at a comparative small outlay. This lode has been intersected at a depth of 22 fathoms from surface by an adit level driven in from the cliff, and extending about 80 fathoms on its course. A shaft has been sunk from surface 10 fathoms below this level, and a level driven east on the course of the lode to meet a winze sunk 17 fathoms below the adit, 30 fathoms east of the said shaft. In the course of these operations the lode from the adit level downwards increased in size and productiveness, and the quality of the ore improved.

The south lode is large and has yielded blende, mundic, and copper ore, the latter, according to the best mining authorities, will be found to improve both in quantity and quality, a few fathoms only below the present workings, and at a shallower depth west of the present ends, from the ground undergoing an entire change (just previously to the works being suspended), the price for driving having been reduced from 7*l.* 10s. to 2*l.* 10s. per fathom, which is, from analogy in the district, highly indicative of the productiveness of the vein.

These lodes, as well as others traversing the sett, are intersected by three known slides and a cross-course, at intervals of from 33 to 60 fms.; the beneficial influence of which on mineral deposits is fully established by experience.

Up to August last year the prosecution of the works had incurred an outlay of about 10,000*l.*; when, notwithstanding that the returns of mineral were fast increasing, and nearly covered the current expenses of the undertaking, it was determined, by the holders who had paid up the calls made upon their respective shares, not to continue working any longer for the benefit of several shareholders who were defaulters to the extent of 1800*l.* and who would not contribute their proportion of the cost towards bringing the mine into paying condition.

It is now arranged to resume operations with efficient machinery, and under a practical management possessing the advantage of experience derived from the actual working of the mine. Upon a careful calculation, it is estimated that a 30-inch cylinder steam-engine will enable the workings to be carried down to a depth of 80 fms. below the adit level; and it is ascertained that copper ores can be raised at the low tribute of 5s. in the 1*l.* as soon as the engine-shaft shall have been sunk to the 20 fm. level.

The capital for these purposes is proposed to be raised by the disposal of 1024 shares at 3*l.* per share to be paid by instalments as follows:—

£1	per share on the	15th August 1849.
10s.	ditto	ditto 15th October 1849.
10s.	ditto	ditto 15th December 1849.
10s.	ditto	ditto 15th February 1850.
10s.	ditto	ditto 15th April 1850.

upon payment of which the holders will participate in the advantages of the association in the same proportion as the original proprietors.

Applications for shares to be made to the secretary, at the offices of the company, No. 2, New Broad-street, and also to Mr. Tredinnick's mining offices, Three King-court, Lombard-street, of whom further particulars can be obtained.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The NEXT MEETING will be HELD at BIRMINGHAM, and will COMMENCE on WEDNESDAY, the 12th of SEPTEMBER, 1849. 44
9, Duke-street, Adelphi. JOHN TAYLOR, F.R.S., General Treasurer.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, BIRMINGHAM.—The EXHIBITION of WORKS of MANUFACTURES and ART, in connection with the ensuing General Meeting of this Association will be OPENED at BINGLEY-HOUSE, BROAD-STREET, BIRMINGHAM, on MONDAY, the 3d of September next. 49

The EXHIBITION will consist of SPECIMENS of ARTICLES of UTILITY and ORNAMENT in METALS, WOOD, and WOVEN FABRICS, MODELS of MACHINERY, and SCIENTIFIC APPARATUS, AGRICULTURAL IMPLEMENTS, and some INTERESTING PROCESSES of MANUFACTURE in OPERATION.

Members and associates of the Association will have free admission. 50

The public will be admitted on payment of One Shilling each person. Season tickets Five Shillings each.

Open from Ten A.M. until Ten P.M.

All CONTRIBUTIONS intended for the Exhibition must be forwarded *immediately*, addressed to the Exhibition Committee, Bingley House, Birmingham.

The carriage upon all articles which are accepted will be paid both ways by the committee, who will also insure the articles against fire; the committee cannot, however, hold themselves responsible for any damage which may occur to the contributions, in transit or in the exhibition, but the utmost care will be taken of them.

WESTLEY RICHARDS, Chairman.
W. P. MARSHALL, } Honorary
GEORGE SHAW, } Secretaries.
Birmingham, August 15, 1849.

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG. 51

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY

BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th of every month; and from Suez on or about the 10th of the month.

BOMBAY.—Passengers for Bombay can proceed by this company's steamers of the 29th of the month, to Malta, thence to Alexandria by her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.

MEDITERRANEAN.—MALTA—On the 20th and 29th of every month. CONSTANTINOPLE—On the 29th of the month. ALEXANDRIA—On the 20th of the month.

SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th 17th, and 27th of the month.

For plans of the vessels, rates of passage-money, and to secure passages and ship cargo, apply at the company's offices, No. 122, Leadenhall-street, London; and 57, High-street, Southampton.

CWMBRAIN PATENT IRON REFINERY.—The PROPRIETORS of IRON FORGES and MILLS are respectfully INVITED to MAKE TRIAL of Mr. BLEWITT'S REFINED IRON, or METAL, PREPARED by a NEW PATENT PROCESS, whereby the IRON is completely FREED from the IMPURITIES CONTRACTED in the BLAST-FURNACE, and, by judicious mixtures, rendered applicable to every kind of manufacture. Heretofore, the metal usually sold in the market has been produced from he worst pigs, scraps, and refuse of some particular blast-furnace, or set of furnaces, without any mixture, or any regard to quality, or the purpose for which it might be required. The PATENT METAL is PREPARED ON SYSTEM, and TO ORDER, for any of the following purposes:— 52

1. For BOILER and TANK-PLATES.
2. For TIN-PLATES, commonly called COKE-PLATES.
3. For STRONG CABLE BOLTS, RIVET, and ANGLE IRON.
4. This COMPOUND PUDDLED, beat under the hammer into a bloom, reheated, and rolled into a 6 or 6½-inch bar, makes TOPS and BOTTOMS for FLANCH and OTHER RAILS, of very superior quality, and attended with less waste than any other kind of iron used for that purpose. It is also well adapted for nail-rods, horse-shoes, and for other ordinary uses of the blacksmith.

The PATENT METAL is marked with a squirrel, and the initials "R. J. B.," and is to be had only at the "Cwmbrain Iron-Works," near Newport, Monmouthshire.

PORTABLE GAS LIGHT.—The HOLLIDAY LAMP generates its own gas cheap; will burn in the open air, without attention, for ten hours; a pure white light, equal to fourteen candles, without meter, wick, or glass; far superior to all other lights, and peculiarly adapted for all public and private purposes—railways, shops, booths, streets, factories, schools, docks, &c. May be seen (price 15s. each) at R. Holliday and Co.'s, the Patentees' Works, Turnbridge, Huddersfield; 28, Oak-street, Manchester; Sussex-street, Sheffield; and 128, Holborn-hill, London. 53

CARBONA TIN AND COPPER MINING COMPANY,
In 1000 shares.
CONDUCTED ON THE COST-BOOK PRINCIPLE.

The Carboni Mines setts extend over a large area of land lying in the upper portion of the parish of Crowan, in the county of Cornwall, comprising the lands of Polcribo, Pengelly, and Busceveran, held under leases for 21 years, at a Royalty of 1-18th, and through the centre part of which setts, the junction of the clay-slate or killas and granite occurs. The width from north to south is about half-a mile, and the length east and west on the course of the lodes one mile and a half.

Between the boundaries north and south 17 lodes are known to exist, and all, more or less, of a productive character. In fact, there is no part of the sett but what will yield tin or indications thereof, on removing the meat earth.

There is no other tract of land in the county, held by one set of proprietors, so abundant in veins, lying together in such a convenient position, for a well arranged system of mining upon them, and so situate as to render a small steam-power sufficient for the proper drainage of the whole.

The workings on these lodes below the water level are of a very limited character. 54

On the great south lode, which is 5 feet wide, yielding tin of a very superior quality, an adit level has been driven 250 fathoms, and a shaft sunk 30 fathoms below it, but, for want of capital, the operations were abandoned. Above the water level, which is 7 fms. from surface, large quantities of tin have in former times been raised, and on re-opening any of these old workings the signs of large and productive lodes remain, and can be traced for 600 fathoms in length.

Two hundred years back, before the ores of copper were known in Cornwall, an adit was taken up by the old tinners at the base of the high lands, near the western boundary of these setts, for the special purpose of unwatering the Carbona tin veins. This adit was driven by them about 150 fathoms, and then abandoned. It appears from an examination of the burrows that the tinners passed through lodes of copper, the value of which was then unknown to them. This adit, on being extended eastward, will shortly reach a large tin lode, varying in size from three to 10 feet wide, which it will unwater at a depth of 40 fathoms from surface, and 600 fathoms in length. In addition to this, it will lay open several well-known copper lodes running up from the killas valley into the granite hill, and which lodes, when worked in the latter part of the last, and beginning of this century, made returns of ores amounting in value to some millions of pounds sterling, yielding enormous profits to the proprietors.

On this deep adit reaching the high ground it will give an effectual drainage and ventilation to a vast extent of mineral property, which will then be worked free from all engine charge forty fathoms deep.

In the eastern part of the setts a very valuable and extensive discovery of tin has recently been made, which with stamping power on the mines, is of itself sufficient to pay all costs, and to yield a fair profit to the adventurers.

At present these mines are held by a few persons, who are desirous of parting with a portion of their shares at 5*l.* for each thousandth share. The entire proceeds from such sales to go towards providing steam power for present drainage—for stamping the ores already discovered, and for the effectual laying open the many valuable lodes seen in the setts, on a larger scale than hitherto attempted.

A careful investigation has shown that a capital of 2000*l.* will be amply sufficient to provide steam power for draining water and stamping the ores—erecting all the necessary buildings—draining the old engine-shaft workings and clearing up the bottoms. With this outlay of 2000*l.*, and for a few months a further outlay of 100*l.* per month for labour and materials, a new mineral district will be opened up in great length and depth, which will give employment to large numbers of men and children—turning out vast quantities of copper and tin ores, at once repaying for the capital invested a very handsome interest with a sound and clear prospect of ultimately realizing wealth on a great scale, when the mines become fully laid open.

For further information and for shares, application to be made to Nicholas Harvey, Esq., Hayle Foundry, Cornwall; William West, Esq., Fowey Consols, Cornwall; William Vawdrey, Esq., Penpoll, Hayle, Cornwall; Messrs. Watson and Cuell, No. 1, St. Michael's Alley, Cornhill, London.

PATENT RAILWAY AND OTHER CARRIAGE AXLES,
MANUFACTURED BY THE
PATENT SHAFT AND AXLE-TREE COMPANY,
BRUNSWICK IRON-WORKS, WEDNESBURY, STAFFORDSHIRE. 55

The Judicial Committee of the Privy Council having declared that the AXLES MADE BY THE PATENT SHAFT AND AXLE-TREE COMPANY had proved a PUBLIC BENEFIT in greatly conducing to the SAFETY of RAILWAY TRAVELLING, the exclusive right to manufacture has been extended for four years, on condition that the practice of charging a moderate price, proved hitherto to have been pursued, should be made imperative.

It was also proved that these Axles were in general use—upwards of 100,000 having been supplied to the English and Continental Railways, among whom are the London and North-Western, the Midland, and the Great Western; that they had withstood frequently severe tests applied by the engineers of these railways for the purpose of experiment, and others still more severe to which they were accidentally subjected in use. In one such instance a Patent Axle, 4½ inches in diameter, sustained the whole force of a heavy train going at the rate of 60 miles an hour, by which it was twisted and bent nearly double, without showing the least fracture.

The patent principle of manufacture causes the axles to be equally strong in all directions, for the "faggot" is made in a cylindrical form, by the external bars being rolled of such a section as to fit accurately around a centre bar. This faggot, however large, is perfectly welded throughout its whole length at one heat, avoiding the necessity of the frequent heating and hammering of the ordinary mode, by which much risk is run of imperfectly welding, burning, and otherwise injuring the iron.

The use of this principle, combined with experience gained of the quality and admixture of the iron and mode of treatment best adapted to resist the strain to which an axle is subjected, enables the Patent Shaft Company uniformly to supply safe axles.

In all cases where the use of the Patent Shaft Company's Axles are specified for, it is respectfully recommended that information be sent to the works; for, although every Patent Axle is stamped with the company's name, worthless axles, made at an expense little beyond that of common bar-iron, have, in many instances, been substituted.

It was given in evidence before the Privy Council, by Robert Stephenson, Esq., M.P., that having, in consequence of an accident, tested a number of such common axles, he found 48 out of 50 broke so easily as to be perfectly unfit for use; that he ordered them all to be removed, and that he has since recommended the Patent Axles to be used exclusively.

The trial of the Patent Shaft Company's Iron is solicited in cases where the power to resist a great strain is of importance. Evidence can be afforded from several railway engineers, of great economy having resulted from its use, in preventing the breakage to which their coupling chains were frequently previously subjected, particularly on the Midland Railway, where the heavy mineral traffic subjects these chains to unusual strains.

Iron manufactured on the patent principle is also recommended for coach and carriage axles, for, if not afterwards injured by the coachsmith, all risk of breakage will be avoided.

SMOKE NUISANCE.—TO ENGINEERS, MANUFACTURERS, MILLOWNERS, AND OTHERS USING STEAM BOILERS.

COLLINS' PATENT STEAM BOILER APPARATUS
CONSUMES SMOKE.
SAVING OF FUEL GREAT (full 30 per cent.) 56
GENERATING STEAM UNEQUALLED.
NO ALTERATION in usual SETTING of BOILERS, and cost of apparatus and fixing trifling.—Also,
WATTEAU'S PATENT FOR PREVENTING INCRUSTATION IN BOILERS, now used extensively, and with the best results.
References given, and plans forwarded, on application to James Buckingham, Esq., C.E., No. 13, Judd-place, New-road, or J. W. Grazebrook, agent, Bull Wharf, Upper Thames-street, London.
BEST STAFFORDSHIRE and LONDON-MADE BOILERS, warranted, and supplied on the lowest terms; prices forwarded, by addressing J. W. Grazebrook.
Bull Wharf, Upper Thames-street, August 4, 1849.

EMERSON'S PATENT LIQUID CEMENT is ready for use, is simple in its application, and only ONE-EIGHTH the COST of OIL PAINT: for beauty it is pre-eminent over all other materials used on the fronts of houses—giving the exact appearance of FINE CUT STONE; can be used at once on fresh Roman cement or other plastering; is particularly calculated for country houses, villas, or gate entrances that have become soiled or dingy, which can be beautified in any weather, at a trifling cost. Sold in casks, of 1, 2, and 3 cwts., at 8s., 15s., and 21s. each. 57
PATENT MINERAL PAINT.
Invaluable as a COATING for SHIPS' SIDES and BOTTOMS, all kinds of WOOD and METAL WORK, roofing felts, leaky roofs, spouts and gutters, doors, sheds, railing, and all kinds of out-door work, and being perfectly waterproof, will preserve their surfaces from atmospheric influence and decay—requires no preparation, and will dry in a few hours.—Sold in casks, 2 to 50 gallons. Brilliant black, 2s.; rich brown, 2s. 9d. per gall.
BELL, LEAR, & CO., 16, Basing-lane, Cheapside.

STRUVE'S PATENT MINE VENTILATOR,
TO COLLIERY PROPRIETORS.
Quantity of air passed through a Mine almost unlimited, to the extent of 200,000 cubic feet per minute, if necessary—depending on size of apparatus. 58
No injury to pumps, tubbing, chains, ropes, or pitwork.
Goaves kept clear.
Not influenced by barometrical and thermometrical changes in the atmosphere, or by wind
Current of air undeviating.
LICENSES will be GRANTED on application to
Mr. WILLIAM PRICE STRUVE, C.E., Swansea.
The ventilator has been erected at the Eaglesbush Colliery, near Neath, and is perfectly efficient, and may be viewed on application to the proprietors, Messrs. Penrose and Evans, Neath.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1808, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, on £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 59
DENT'S PATENT DIPLIEDOSCOPE,
or Meridian Instrument, is now ready for delivery.—Pamphlets containing a description and directions for its use is. each, but to customers gratis.

NOTICE.—WENHAM LAKE ICE SUPERSEDED!
(BY ROYAL LETTERS PATENT.)
MASTERS AND CO.'S PATENT SHERRY COBBLER FREEZING AND COOLING JUG. 60
By this Patent Jug, spring water is congealed into the purest ice, on the table or sideboard, for Sherry Cobblers, &c., in FIVE MINUTES, at the cost of Twopence. The public is respectfully invited to see the process of this extraordinary and useful invention, as actually BOILING WATER CAN BE CONVERTED INTO ICE without the aid of ice!
Patentees of the Freezing Machines (by which 20 to 100 quarts of Desert Ice can be made in a few minutes, and Rock Ice at the same time, and Wine cooled), Cooling Decanters, Refrigerators, Butter Coolers, and Percolators. By this last-mentioned article a bottle of wine, &c., can be cooled in a minute without ice, for one halfpenny.
MASTERS & CO.'S IMPROVED APPARATUS FOR MAKING PURE SODA WATER, LEMONADE, NECTAR, and all ÆRATED WATERS.—This apparatus needs only to be seen to be appreciated. Price 30s.—MASTERS & CO., PATENTEES,
294, REGENT-STREET, AND 7, MANSION-HOUSE-STREET, CITY.—Also,
BY ROYAL LETTERS PATENT,
MASTERS & CO.'S PATENT ROTARY BUFF KNIFE CLEANERS, which will clean and polish, equal to new, twelve knives in one minute, without noise or dust.
The various processes shown at Masters and Co.'s Show Rooms, 294, Regent-street, and 7, Mansion-house-street, City, and may also be seen at the Royal Botanic, Zoological, and Colosseum, Regent's-park, and the Polytechnic Institution, Regent-street.
294, REGENT-STREET, AND 7, MANSION-HOUSE-STREET, CITY.

THE PATENT OFFICE AND DESIGNS REGISTRY,
No. 210, STRAND, LONDON. 61
INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.
Messrs. F. W. CAMPIN and CO. offer their services, and the benefit of many years' experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due regard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.
Also, in MECHANICAL and ENGINEERING DRAWINGS, whether connected with Patents, Railways, or otherwise, by a staff of first-rate draftsmen.
Application personally, or by letter, to F. W. Campin and Co., No. 210, Strand (corner of Essex-street).

DAMP AND GASEOUS EXHALATIONS.
SANATARY MEASURES.
All MEMBERS of BOARDS OF HEALTH are especially DIRECTED to the most EFFECTIVE MEANS which they can ADOPT to PREVENT the injurious and often FATAL EFFECTS upon the HEALTH of the COMMUNITY, arising from exhalations that are produced from moisture, decayed animal matter (as in grave-yards), stagnant water, and collections of fœtid refuse, tending to produce a miasmatic state of atmosphere. In situations so effected, the impervious quality of the ASPHALTE of SEYSSEL renders it the most perfect PAVEMENT or COVERING that can be relied upon for hermetically closing, and thereby preventing the rising of moisture and escape of noxious vapours. The present extensive application of this material for covering roofs, terraces, and arches, for preventing the percolation of wet, is strong evidence of its effectiveness for the above purposes, which is further confirmed by the following extract from the Report of the Commissioners on the Fine Arts:— 62

"In 1839, I superintended the construction of a house of three stories on the Lac d'Enghein. The foundation of the building is constantly in water, about 19½ inches below the level of the ground floor. The entire horizontal surface of the external and interwal walls was covered at the level of the internal ground floor with a layer of SEYSSEL ASPHALTE,* less than half an inch thick, over which coarse sand was spread.

Since the above date, no trace of damp has shown itself round the walls of the lower story, which are for the most part painted in oil, of a grey stone colour. It is well known that the least moisture produces round spots, darker or lighter, on walls so painted. Yet the pavement of the floor, resting on the soil itself, is only about 2½ in. above the external surface of the soil, and only 19½ in., at the utmost, above that of the sheet of water.

The layer of Asphalte having been broken and removed, for the purpose of inserting the sills of two doors, spots indicating the presence of damp have been since remarked at the base of the door-posts."

* This method has been adopted at the new Houses of Parliament.

Seyssel Asphalte Company, Stangate, London. I. FARRELL, Secretary.

BY HER MAJESTY'S ROYAL LETTERS PATENT.
JOHN BROWN'S CONICAL BUFFER, BEARING, AND DRAW SPRINGS.

The Patentee invites the attention of Railway Authorities, Carriage Builders, &c., to this simple, efficient, and economical BUFFER SPRING—the main object of which is to prevent the great loss accruing to companies, &c., from the extensive damage to their waggons, vans, &c., owing to the severe checks and sudden concussions to which they are subject.

Specimens may be seen and further information obtained of the PATENTEE, 63
ATLAS STEEL WORKS,
SHEFFIELD,
or of his AGENTS, as under:—
LONDON:
Mr. J. Freeman, 19, Artillery-place, Finsbury.
GLASGOW:
Mr. A. Tolmie, 166, Buchanan-street.
BIRMINGHAM:
Mr. G. Tilfourd, No. 84, Great Charles-street.

IMPROVED LIFTING JACKS,
MANUFACTURED BY
W. AND J. GALLOWAY,
PATENT RIVET WORKS,
MANCHESTER.

IMPROVED RATCHET JACK. HALEY'S PATENT LIFTING JACK.

*** The attention of parties who employ
Lifting Jacks,
is respectfully requested to the superiority of those annexed, over those hitherto in use. 64

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their offices, No. 25, FLEET-STREET, where all communications are requested to be addressed. [*August* 18, 1849.